

## Parent-Reported Child Diet Assessments

A child's diet can be an important factor in their overall health, and many ECHO studies investigate what children eat since it relates to different health outcomes. Often, caregivers describe what their child ate of the previous day or week with a questionnaire. These questionnaires rely on parents to remember and estimate when and how much their child ate, which can result in errors. Additionally, it can be hard for parents to accurately report meals and snacks their child ate during school hours because they are not there to observe. More research was needed to better understand barriers to reporting a child's diet, difficulties with using different reporting tools, and the accuracy and effectiveness of such tools.

Below you will find information on two studies that help answer questions on this topic.

### ***How Can Parents Accurately and Reliably Report on their Child's Diet?***

*Author(s): Traci Bekelman, Dana Dabelea, et al.*

#### Who sponsored this study?

This research was supported by the Environmental influences on Child Health Outcomes (ECHO) program, the Office of the Director, and the National Institutes of Health.

#### Why was this study needed?

The purpose of this study was to better understand what kept parents from accurately reporting their child's diet and to identify the burdens the reporting tools put on parents and children.

#### Who was involved?

This study involved 40 children ages seven or eight in Colorado and Louisiana and their parents.

#### What happened during the study?

Parents reported on their child's diet using the Remote Food Photography Method (RFPM) and the Automated Self-Administered 24-hour Dietary Assessment Tool (ASA24). The RFPM involves the parent taking photos of their child's meals and snacks before and after eating using a smartphone app. The ASA24 involves the parent using a website to describe what their child ate on the previous day, including estimates of what the child ate while not present with the parent. Parents reported on their children's diet using each of the two methods for three days apiece. Afterwards, parents were given surveys on their experience with the tools, and 32 parents participated in focus group discussions.

#### What were the study results?

Parents reported that the strengths of the RFPM included that the RFPM was easy to use and liked that they were not responsible for determining portion sizes. Some of the barriers of RFPM were parents missing photos when they could not see their child's meal, parents forgetting to take photos, interrupting the child's eating time, and the child feeling embarrassed to have their meal photographed at school. Parents reported that the strengths of the ASA24 included the ability for them to enter all of

the data at once in a single system. Some of the burdens of the ASA24 included the amount of time that parents had to enter information each day and some meal items missing from the website's database.

Footnote: Results reported here are for a single study. Other or future studies may provide new information or different results. You should not make changes to your health without first consulting your healthcare professional.

### Impact

This study provided information on the how useful these parent-report tools are for easy and accurate reporting of child diet. Additionally, parents shared some of troubles that may prevent them from accurately recording their child's meals. These results can also help researchers determine the helpful features and less helpful features of each tool, allowing them to design better child diet studies.

### What happens next?

Future studies comparing the RFPM and ASA24 should look more closely at whether the burdens and barriers associated with those tools impact the quality and reliability of parent-reported child diet data. The results of this study may also help advance these parent-reported assessments, reducing participant burden and improving the quality of child diet data.

### Where can I learn more?

Access the [full journal article](#), titled "A Qualitative Analysis of the Remote Food Photography Method and the Automated Self-Administered 24-hour Dietary Assessment Tool for Assessing Children's Food Intake Reported by Parent Proxy," in the *Journal of the Academy of Nutrition and Dietetics*.

*The content is the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.*

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## ***A Comparison of Two Methods for Measuring What Children Eat***

*Author(s): Traci Bekelman Dana Dabelea, et al.*

### Who sponsored this study?

This research was supported by the Environmental influences on Child Health Outcomes (ECHO) program, the Office of the Director, and the National Institutes of Health.

### Why was this study needed?

Researchers started using new technologies to measure what children eat, but there is still a lot researchers don't know about how accurate and burdensome these technologies are for measuring child diet.

## Who was involved?

In this study, researchers included parents of children ages seven or eight from cities in Colorado and Louisiana. Most of the caregivers were moms who had at least a college degree.

## What happened during the study?

Caregivers tried two ways of measuring what their child ate. The first way was through RFPM, a phone app that required caregivers to photograph their child's food at the beginning and end of each meal or snack. The second way was through ASA24, which is a website where parents manually entered what their child ate during the previous day. They were then asked to complete a survey on satisfaction, how easy the tools were to use, and what made the tools hard to use.

## What were the study results?

Caregivers were happy with both methods. Some of the caregivers had challenges with the website technology of the ASA24 and may have reported more food than their child actually ate. When using the RFPM, caregivers were able to photograph most of their child's meals and snacks, but not all of them.

Footnote: Results reported here are for a single study. Other or future studies may provide new information or different results. You should not make changes to your health without first consulting your healthcare professional.

## Impact

The researchers intend to use these findings to improve the way child diet is measured and monitored. Caregivers may need help using the ASA24 website technology or providing the correct details about their child's diet. Caregivers who use the RFPM may need more reminders to ensure that they photograph their child's meals and snacks. Caregivers liked both methods, so future improvements will focus on making them both more accurate.

## What happens next?

Researchers will continue to learn about and improve these methods to make them even more accurate while reducing the burden on caregivers.

## Where can I learn more?

More information can be found in a [webinar](#) previously organized by the National Academies of Sciences, Engineering and Medicine, titled "Approaches to Assessing Intake of Food and Dietary Supplements in Pregnant Women and Children 2 to 11 Years of Age."

Access the [full journal article](#), titled "A comparison of the Remote Food Photography Method and the Automated Self-Administered 24-hour Dietary Assessment Tool for measuring full day dietary intake among school-aged children," in the *British Journal of Nutrition*.

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