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Perceived Benefits, Barriers, and Strategies of Family Meals Among Children with Type 1 Diabetes and their Parents: Focus Group Findings

Alisha J. Rovner¹, Sanjeev N. Mehta², Denise L. Haynie¹, Elizabeth M. Robinson³, Heidi J. Pound², Deborah A. Butler², Lori M. Laffel², and Tonja R. Nansel¹

¹Division of Epidemiology, Statistics and Prevention, Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD

²Pediatrics, Adolescent and Young Adults Section, Joslin Diabetes Center, Boston, MA

³Department of Psychology, Virginia Commonwealth University, Richmond, VA

Abstract

Dietary management of type 1 diabetes (T1D) has become much less restrictive and more flexible in recent years due to contemporary insulin regimens which may afford families of children with T1D greater ease in sharing family meals. While these treatment advancements may facilitate family meals, the overall demands of diabetes management may influence family's perceived or actual ability to do so. Youth with T1D (ages 8–20) and parents participated in separate focus groups. Thirty-five youth with T1D (mean age 15.1 ± 3.6 years) and their parents participated in 21 focus groups (12 youth groups, 9 parent groups). Although there was substantial variability in how often family meals occurred, both parents and youth consistently perceived family meals as valuable and enjoyable. The major barrier to family meals discussed by both youth and parents was busy schedules. Strategies for having family meals discussed by parents included shopping to ensure availability of the foods needed to prepare meals, planning and cooking meals in advance, and using simplified cooking methods. These findings suggest that a family-focused approach to nutrition intervention in this population, as opposed to one targeting only the child with diabetes, may improve the chance for successfully dietary change.

Introduction

Family meals are beneficial for developing good eating habits (1,2) as well as enhancing children's health and overall well-being (3). In cross-sectional studies, positive associations have been observed between greater frequency of eating family meals and healthful eating patterns, including higher consumption of fruits and vegetables and lower consumption of soft drinks (1,2). Family meals represent an important opportunity for exposure to healthful foods, parental modeling of eating behaviors, and positive family interactions and have been described as a "marker of and a vehicle for promoting family connectiveness" (4). Eating habits shaped through family meals may be enduring since eating family meals during adolescence has been associated with higher diet quality and healthful meal patterns during adulthood (5). In addition,

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the benefits of family meals extend well beyond that of just promoting good nutrition. In a Minnesota study of 4,746 adolescents, the frequency of family meals was inversely associated with tobacco, alcohol, and marijuana use, grade point average, depressive symptoms, and suicide involvement (3).

Dietary management of type 1 diabetes (T1D) has become much less restrictive and more flexible in recent years due to contemporary insulin regimens (6) which may afford families of children with T1D greater ease in sharing family meals. Nutrition guidelines for children with T1D focus on healthy eating and do not advocate a specific diet or restriction of particular foods (7). While these treatment advancements may facilitate having family meals, the overall demands of diabetes management may influence family's perceived or actual ability to do so. Concerns about meal timing, beliefs about acceptable foods for the child with T1D, or managing blood glucose excursions could serve as barriers to shared family meals.

Research regarding family meals in youth with T1D in the current era of flexible insulin regimens is needed. Research on parent and child mealtime interactions in families of preschool aged children with T1D indicated similar behavioral challenges during mealtimes when compared to age-matched healthy controls (8). Similarly, a recent study of 59 families of 2 to 8-year old children with T1D and 59 same-age children without T1D did not find differences in child behavior at mealtimes between the two groups (9). These findings suggest that young children with T1D are not at greater risk for disruptive behaviors at mealtimes; however, these studies did not address the occurrence of health-promoting family eating behaviors. The SEARCH study, which consisted of an ethnically and regionally diverse cohort of 1,511 children and adolescents with T1D, found inadequate consumption of fruits, vegetables and whole grains as well as excessive intake of saturated fat; (10) however, family meal behaviors were not studied. These observations suggest a need to investigate family eating behaviors among older children or adolescents with T1D, and more specifically, the sharing of family meals in these families. In the current era of intensive insulin therapy, it is important to understand how families perceive the interaction of diabetes management with the routine of family meals.

The aim of this study was to qualitatively assess perceptions regarding family meals among families of children with T1D, including benefits, barriers, strategies to overcome these barriers, and perceptions regarding diabetes management issues as they relate to family meals.

Methods

Subjects

Participants were receiving diabetes care in the Pediatric, Adolescent and Young Adult Section of the Joslin Diabetes Center in Boston, MA. Youth with T1D and their parents were recruited by trained research assistants over a 6 month period by one of the following methods: phone or email contact prior to a clinic appointment, advertisement posted in the waiting area, or direct contact with research staff on the day of a clinic appointment. Eligibility criteria included: 8 to 20 years of age, living with a parent, and diagnosis of T1D for at least 6 months, and without pre-existing chronic disease that impacted dietary behaviors (e.g., celiac disease). The study was approved by the Committee on Human Subjects at Joslin Diabetes Center. Youth older than 18 years of age and parents provided informed consent and youth younger than 18 years of age provided assent. Youth and parents were provided complimentary parking and were each compensated \$25 for focus group participation.

Focus group methodology

Focus group methodology was chosen to elicit perceptions in an open-ended way, and to facilitate dialog that occurs when participants reflect on one another's statements. Qualitative research methodology has proven to be an effective method for obtaining information about eating attitudes, perceptions, and behaviors in other populations (11). Prior to the first focus group research staff received approximately 4 hours of training in focus group facilitation and review of the specific focus group guides for this study. Additionally, staff engaged in extensive role playing. Youth and parents participated in separate focus groups that lasted approximately 60 minutes each. The youth groups were divided into younger (approximately 8–13 year olds) and older (approximately 12–18 year olds) groups; however, there was overlap in the ages of participant between the groups to accommodate scheduling. Group discussion was facilitated according to a structured guide developed by a research team consisting of members from the following disciplines: psychology, pediatric endocrinology, nutrition science, dietetics, and social work. Figure 1 presents questions from the focus group guide that served as the basis for the present analysis.

Focus groups were audio taped using two digital recorders. Each session was transcribed verbatim by a research assistant and verified by a second research assistant. Broad categories derived from the focus group guide, including healthy eating, family and peer influences on eating, family meals, and diabetes management, were used to structure the coding scheme. Figure 2 presents codes used in this analysis. Emerging themes within those categories were identified from four focus groups (2 parent, 2 youth) and initial codes were specified. Two research staff independently coded each transcript and reviewed each to resolve discrepancies and achieve consensus. Statements meeting the criteria of multiple codes were assigned all relevant codes. The entire coding team met regularly to modify the coding scheme and incorporate new ideas from emerging data. For this analysis, the content of the text was examined within and across codes to identify core themes relevant to participants' perceptions of family meals (12). Illustrative quotes were selected to highlight central themes. The qualitative research software, HyperRESEARCH version 2.7 (Researchware, Inc, Randolph, MA) was used to process the coded transcripts.

Demographic and clinical information for youth were abstracted from the electronic medical records.

Results

Participants

Thirty-five youth with T1D and their parents participated in 21 focus groups (12 youth groups, 9 parent groups). The mean age of the youth participants was 15.1 ± 3.6 years. There were roughly an equal number of males (49%) and females (51%), and most of the parent participants (74%) were mothers. The youth were using either multiple daily injections (50%) or insulin pump therapy (50%); the average daily insulin dose was 0.8 ± 0.2 units/kilogram.

Themes

Themes related to family meals were collapsed across the focus groups separately for youth and parent groups. Three primary themes emerged: perceptions and benefits, barriers, and strategies related to family meals.

Perceptions/Benefits of Family Meals

Although there was substantial variability in how often family meals occurred (ranging from never to every day), both parents and youth consistently perceived family meals as valuable and enjoyable. Parents and youth discussed family meals primarily in terms of breakfast or

dinner; however, some also mentioned weekend lunches. The majority of youth and parent groups stated that shared family meals made it easier to eat healthfully and parents discussed having more control over the quality of meals when they ate together.

“We sit down and have dinner together. I can control what I feed her when she’s [eating] with me”. (Parent)

“I think if you’re trying to eat healthy, it’s a lot easier if you can eat with your family, and everyone’s eating the same thing because if you’re not eating together, then you kind of go pick at everything to make your own meal”. (Youth)

Many youth and parents discussed additional benefits of family meals that were unrelated to nutrition such as talking to other family members and sharing what happened during their day.

“At our house, we try to have a good, healthy planned out [meal with], meat and vegetable and dessert and even having people around to talk. Everybody in the family tells about what they did. It’s more- not only nutritional, but also beneficial.” (Parent)

“I think the family meals are invaluable. Even when brother and sister are at each others’ throats, something changes at the dinner table, and it all kind of gets put aside and everybody shares – conversation time.” (Parent)

“Dinnertime is a great time, when they come home and you learn things about their day ... So family value, it helps. It might deal with the emotional part of his life.” (Parent)

“Because then we sit down and talk about our day and what’s going on and stuff like that.” (Youth)

An additional theme that arose in the parent groups but not the youth groups was that of using family meals as an opportunity to teaching manners.

“Just to try to teach them manners...don’t all talk at the same time, eat with your mouth close. Because I tell them, “You’re not going to always eat with mommy with people that love you, but you are going to eat with people that you don’t always really know or you are going to make friends and we want them to invite you back,” so we just practice manners.” (Parent)

Barriers to Family Meals

The major barrier to family meals discussed by both youth and parents was busy schedules making it difficult to sit down together for a family meal. Discussions centered around family members’ differing schedules, including adolescents frequently being away from home. Youth referenced sports and other after-school activities; parents additionally referenced work schedules, and teenagers’ part-time jobs.

“Being together as a family and eating and socializing is really important to us, and that’s how we see it, and we’d like to really keep it that way...people are so involved in everything that it’s tough” (Parent)

“He comes and goes as he pleases, and you know we don’t-I don’t feel like we ever have...a sit down meal, but not like [our] teenagers are ever there. It’s just eating in the middle of the night.” (Parent)

“My little sister gets out of school at 6, my brother gets out of school at 4, and then my other little sister gets out of school at 3. So basically, we’re never home at the same time. Then sometimes, I’ll go to work, and then they’ll be stuck doing homework so...we never have time. When we’re all in the house or if we’re not in the house, my mother will still cook, and we just get food whenever we want to get food.” (Youth)

Although groups consistently reported conflicting schedules as the barrier to family meals occurring, there were differences in their ability to overcome this barrier. Some families reporting making the time despite busy schedules and expected family members to be in attendance whereas other families said it was impossible to eat together as a family.

Notably, no youth or parent groups brought up the topic of diabetes management issues as being a barrier to family meals. When asked whether the youth with T1D ate different foods than other family members, those who did so reported that food preferences directed their food choices rather than diabetes needs.

Strategies for Family Meals

Parents, but not youth, shared strategies to facilitating family meals. Strategies discussed included shopping to ensure availability of the foods needed to prepare meals, planning and cooking meals in advance, and using simplified cooking methods.

“It’s a challenge. I’m a working mom. I have a full-time job, and I commute. I have to say I put a lot of effort and time in to it. I grocery shop more often than I would like and I make lists and it’s about availability, accessibility.” (Parent) “I always have something ready in the fridge for a meal.” (Parent)

“I pre-make my meal the night before for the next day.” (Parent)

Similar to the discussion of barriers to family meals, none of the parents brought up the need for strategies to address diabetes management issues to facilitate family meals.

Discussion

In the era of contemporary insulin therapies, nutrition guidelines for children with T1D focus on healthy eating and do not advocate a specific diet or restriction of particular foods (7). Advances in insulin therapy provide increased flexibility in meal timing and content. While these factors would be expected to facilitate normalcy in family eating patterns, beliefs about acceptable foods, concerns about meal timing and blood glucose excursions, or the overall demand of diabetes management activities could impact the sharing of family meals. Findings from these focus groups suggest that sharing family meals is not impacted appreciably by the requirements of diabetes management. Rather, barriers previously identified in the general population, notably limited time and busy schedules, appear to be the primary constraints to the occurrence of shared family meals for families living with diabetes (4).

Furthermore, findings from these focus groups indicate that family meals are important to both youth with T1D and their parents. Although it is not surprising that parents value family meals, which has been described by parents of children without T1D (13), it is noteworthy that youth value family meals as well. Previous studies among the general population demonstrated that benefits of family meals included conversation, being together, and enjoying home-cooked nutritious meals (4,13). Our findings confirm these perceptions in families living with type 1 diabetes.

Nutrition interventions targeting families of youth with T1D should include approaches to facilitate family meals. As noted above, dietary recommendations for T1D focus on consumption of a healthy diet, and family meals, in children without T1D (1–3,5), have been associated with healthier eating patterns. Strategies designed to help families overcome the common barriers of time and busy schedules are likely to be relevant and effective for families of youth with diabetes. Families should also be encouraged to broaden the notion of shared meals beyond the traditional family dinner to include breakfast and weekend lunches as opportunities to promote nutrition and family bonding. The time of day when a family meal

occurs is less important than the fact that meals are being prepared in the house and that family members are spending time together and communicating. More broadly, these findings suggest the merit of examining family-focused approaches to nutrition intervention in this population, as opposed to those targeting only the child with diabetes.

A strength of the present study was that focus groups were conducted both with youth and parents. Previous nutrition focus groups conducted in other pediatric populations have either included only youth (11) or only parents (13,14), but not both. To better inform the design of nutrition interventions that will target the entire family it is important to elicit perceptions from both youth and their parents. Another strength is the large number of focus groups that were conducted. However, it is important to note that this sample did not include youth who were recently diagnosed, and that families who participated in the focus groups may represent a more well-adjusted and motivated group. Because the focus groups were conducted in the clinical care setting, participants may have felt pressured to provide socially-desirable responses; however, their willingness to discuss barriers suggests that responses were not overly influenced by perceived social desirability. Furthermore, an advantage of the focus group format is that its social orientation may prompt increased candor (15). Notably, most parents were mothers; additional data on fathers' perspectives regarding family meals would be useful.

Conclusions

Researchers designing nutrition interventions for youth with T1D should consider family-focused interventions targeting strategies to increase the occurrence of shared family meals. Practical advice on how to effectively plan and prepare meals is needed to address the salient issues of limited time and busy family schedules. Nutrition interventions should incorporate the perceived benefits of family meals that extend beyond diet quality and include strengthening family bonds.

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<p>How does your family decide what's for breakfast? Lunch? Dinner? Snacks?</p> <ul style="list-style-type: none"> • <i>How do decisions about what food is purchased get made?</i> • <i>How do decisions about how food is prepared get made?</i> • <i>What about dealing with your family might make it easier or harder to change what your family eats?</i>
<p>Tell me about your family's eating schedules on a typical weekday.</p> <ul style="list-style-type: none"> • <i>Are there meals where everyone or most everyone eats at the same time? If not, why?</i> • <i>Are there times when family members are on their own to feed themselves? If not, why?</i>
<p>How, if at all, are meals done differently on weekends?</p>
<p>How often do family members sit down to a meal together?</p> <ul style="list-style-type: none"> • <i>Who is expected to be at a family meal?</i> • <i>How important, if at all, is having family meals together? What about family meals make them important?</i>
<p>How does your child with diabetes eat compared to the rest of the family? If different: How does he/she feel about those differences?</p> <ul style="list-style-type: none"> • <i>Do you all eat the same foods?</i> • <i>If no: How are the foods that he/she eats different?</i>
<p>How do you find time or balance preparing meals with your other family and diabetes responsibilities?</p> <ul style="list-style-type: none"> • <i>How and when do you plan your family's meals and snacks?</i>
<p>What are some activities or techniques we might use to make learning about healthy eating more fun?</p>

Figure 1.
Key focus group questions related to family meals

Code	Description
Family meals	<i>Whether or not family meals occur, their importance, and how they are viewed/utility (e.g. family time, control of behavior)</i>
Family-influence on eating	<i>Perceptions of /reflections on how family members influence them, positively or negatively, regarding food choices and eating.</i>
Family-roles shopping/preparing	<i>Who plans meals and shops and how food preparation gets done in the household</i>
Family meals barriers	<i>Things that make having family meals difficult</i>
Type 1 diabetes- diet	<i>How diabetes affects (or doesn't affect) what the child is actually eating or vis versa, such as statements that their diet has changed since diagnosis, that the child eats the same or differently from other family members</i>
Strategies- meal preparation	<i>Strategies that deal with how foods are prepared for meals</i>
Strategies – family	<i>Strategies that would increase healthy eating when with family members and at home</i>

Figure 2.
Coding Scheme