Managing diabetes is like riding a bike - - - you have to keep adjusting.

Adjustments
- The whole family
- Present blood sugar reading
- Future blood glucose levels
- Parent’s involvement
- Child’s abilities and readiness
- And how I practice as a dietitian/diabetes educator

Goals for child and family
- Child is competent with eating: Has positive eating attitudes and behaviors
- Feeding the child is rewarding for the parent
- Family dynamics around feeding are healthy and positive
- Long-term: Raise an adolescent/young adult who is responsible & capable with feeding him- or herself

Ellyn Satter’s Division Of Responsibility In Feeding
- Parent: What, Where, When
- Child: How much, whether
I liked the division of responsibility from the first, and applied it in my well-child appointments.

Why did I make an exception with diabetes?

My Worry List
- My Persistent NPH Mentality
- Hypoglycemia
- Blood glucose excursions
- Limited time in clinic
- Talking about and charting DOR
- Giving up getting others to….
- Letting go of the “perfect meal” (low-fat, low-salt, moderate carb)
- Co-morbidities

Green beans every night.
No child ever ate according to a formula……..Ellyn Satter

www.ellynsatterinstitute.org

DOR is not just for meals!
Letting go of getting others to…..

BLUE = Questions you are invited to think about. What is your experience? Your thoughts? At the end you will be asked to vote on how you feel about the DOR in type 1 diabetes management.

Bringing DOR into Diabetes Clinic

- Normal Eating
- Supportive Parenting
- Meal Planning
- Shifting Responsibilities from Parent to Child

We have used commercial photographs; no patient photos appear in this presentation
Resources: ellynsatterinstitute.org

Our job:
describing diabetes self care so that it is doable.

Doable means that:
- Diabetes treatment is adjusted to the child
- The family’s preferences and traditions are respected
- Eating is enjoyable
- Feeding is rewarding
- Parents are helped with parenting through sDOR feeding

ADA Position Statement 2014
Treatment Guidelines for Type 1 Diabetes
Goal for Children under 18 years old: A1c <7.5

It is my view especially with the young children, that we not add further pressure to already stressed caregivers. Rather, providers should support incremental improvements as the child with diabetes moves toward the stated goal of 7.5 percent without significant hypoglycemia.

Fran Cogen, MD, CDE
Children’s National Health System
We bring good tidings!

Behavior Research: We Can Trust Children with Their Eating

- Children will eat
- They know how much to eat
- They will eat a variety
- They will grow predictably
- They will mature with eating

TO BE CAPABLE EATERS, CHILDREN MUST HAVE SUPPORT FROM ADULTS

- Choose and prepare healthy food
- Provide regular meals and snacks
- Make eating time pleasant
- Give appropriate mastery expectations
- Not let the child graze for food or beverages between times
- Accept the child’s size and shape

GROWTH AND DIABETES

- Stable, consistent growth is normal
- Abrupt, rapid crossing of growth percentiles is unlikely to be normal
- Disruption in growth is likely to indicate disruption in feeding, possibly other causes
- Optimizing feeding, addressing other causes will restore child’s own regulatory abilities, consistent growth

CHILDHOOD OVERWEIGHT REDEFINED

- The problem is not high weight per se, but abnormal weight divergence for the individual child
- Only longitudinal growth pattern can determine a child’s normal weight
- Specific cutoffs appropriate only population-wide, not for the individual child

Satter, ESI Position Statement, 2003
www.ellynsatterinstitute.org
### MANAGEMENT OF CHILD DIABETES

<table>
<thead>
<tr>
<th>Conventional model</th>
<th>Feeding dynamics model</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Insulin Rx</td>
<td>1. Parents maintain a division of responsibility</td>
</tr>
<tr>
<td>• Food Rx to cover insulin Calories Foods Portion sizes</td>
<td>2. Child regulates with hunger, appetite and satiety</td>
</tr>
<tr>
<td>• Child to eat food Rx Meal-by-meal Day-by-day</td>
<td>3. Child follows consistent growth trajectory</td>
</tr>
<tr>
<td></td>
<td>4. Insulin covers food eaten</td>
</tr>
<tr>
<td></td>
<td>5. Adolescent gradually learns independent food management</td>
</tr>
<tr>
<td></td>
<td>6. Family dynamics around feeding—and the child—are healthy and positive</td>
</tr>
</tbody>
</table>

### OFFER A VARIETY, LET CHILD PICK & CHOOSE
**YOU DON'T HAVE TO EAT “X” TO GET TO EAT “Y”**

- Protein source
- Two carbohydrate foods
  - Rice, potatoes, noodles, etc
  - Handy carbohydrate: bread, tortillas, pita, crackers etc
- Fruit or vegetable or both
- Milk or water
- Butter, margarine, salad dressing, gravy etc

### CHILDREN EAT UNPREDICTABLY:
**Food acceptance**

- Children eat what they like & what tastes good
- They don’t eat a square meal but only 2-3 foods
- They sneak up on new food and learn to like it
- What they eat one day they reject another
- They tire of even favorite food and eat something else

### BE CONSIDERATE, DON’T CATER WITH MEAL PLANNING (FOR CHILDREN AND OTHER PEOPLE)

- Offer a variety of good-tasting food
- Let children (and other people) pick and choose from what’s on the table
- Pair foods
  - Familiar foods with unfamiliar
  - Favorite with not-so-favorite
- Don’t make children (or other people) eat
- Don’t limit the menu to foods children (and other people) readily accept

### PLANNED STRUCTURED SNACKS

- At least two items
- Provide carbohydrate, protein and fat
- Suggested limit of carbohydrate to 15-30 grams without additional insulin injection (more carbs if insulin given)
- More if anticipated increase in activity
- Eat low carbohydrate foods to hunger

How do you handle this?
FEEDING PRESSURE BACKFIRES
Forcing, bribing, coercing, applauding, rewarding, explaining, teaching, restricting
• Getting children to eat certain foods
• Getting children to eat more or less
• Getting children to avoid certain foods

CHILDREN EAT UNPREDICTABLY:
Food regulation
• One child eats a lot more—or less—than another
• Children eat a lot one day or one meal, not much the next
• Children don’t clean their plates or eat standard portions unless adults insist
• Children stop eating when they are full even if they haven’t eaten much

CHILDREN ARE EXCELLENT REGULATORS
• Calorically dense food—get filled up faster and eat less
• Large portions—don’t eat it all
• Children make up for errors in eating

FAMILY MEALS ARE CRITICALLY IMPORTANT
• Meals reassure children they will be fed
• Going to the table hungry and eating until satisfied is key to food regulation
• Meals help children learn to like new foods
• Meals give children emotional reassurance: Access to parents, structure and limits
• To do well with eating, children must get their emotional needs met

A comment to a parent in clinic can change everything:
“Your child knows how much to eat.”

CHILDREN WITH REGULAR FAMILY MEALS DO BETTER
• Nutritionally, socially, emotionally, academically & with respect to resistance to weight management drug abuse and early sexual behavior
• Family meals more instrumental in positive outcome than SES, family structure, after-school activities, tutors, or church

References: Eisenberg; Gillman; Hofferth; Videon; Council Economic Advisors; Taveras; Mayfield, CASA
Do a web search: “family meals”
FEEDING IS PARENTING

PARENTING WITH FOOD
- **Authoritative**: “Here’s what I made. You can decide what and how much to eat.”
- **Authoritarian**: “Eat this food in this amount at this time”
- **Permissive**: “What do you want? When do you want it?”
- **Neglectful**: “Don’t bother me. You find something to eat.”

Ellyn Satter’s *CHILD OF MINE*, Chapter 9, Feeding your preschooler

FEEDING DYNAMICS MODEL
Of child diabetes management
1. Parents maintain a division of responsibility in feeding
2. The child regulates food intake with hunger, appetite and satiety
3. Child follows consistent growth trajectory
4. Insulin covers the food eaten
5. Adolescent gradually learns independent food management
6. Family dynamics around feeding are healthy and positive

“FORBIDDEN” FOODS- What to do
- *Not* unlimited access
- Instead, give access within the structure of meals & snacks
  - Potato chips with the lunch-time sandwiches (enough to have leftovers)
  - Give one dessert with the meal (so it doesn’t compete)
  - Occasionally have unlimited cookies & milk for sit-down snack

Beverages
Can sweet beverages be managed like a dessert?

What if you want a soda with your pizza?
Trusting Parents and Kids to Find “Just Right”

The Middle Road in Dealing with Co-morbidities

- Start with getting grounded in regular, dependable meals and snacks
- Emphasize what might be added to the meal, rather than taken away
- Step by step, emphasizing good taste

GOALS FOR CHILD AND FAMILY

- Child is competent with eating: Has positive eating attitudes and behaviors
- Feeding the child is rewarding for the parent
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- Long-term: Raise an adolescent/young adult who is responsible & capable with feeding him- or herself

Shifting Diabetes Management Responsibilities Between Parent and Child

Adapted from Understanding Diabetes
H. Peter Chase and David M. Maahs
Barbara Davis Center for Childhood Diabetes

Shifting Responsibility: Food Management and Diabetes Care

Turning Over Diabetes Tasks to the Child

Challenge without overwhelming, provide support without controlling, give independence without abandoning.
Ellyn Satter
Child Under 3 Years of Age

**Parent**
- Performs all care
- Reads and responds to child’s signals
- Administers insulin after feedings
- Varies treatment schedule to normal changes in feeding & sleeping patterns

continued >>

**Child Under 3 Years of Age**

**Parent (continued)**
- Identifies hypoglycemia vs age-appropriate tantrum
- Teaches others about diabetes care and identification of hypoglycemia
- Provides feedings, meals and snacks at regular times over the day
- Allows child to eat as much or little as child wants

---

**Child Under 3 Years of Age**

**Child**
- Is unable to recognize hypoglycemia
- Gets used to daily tasks (testing and insulin administration)
- May pick site for blood test
- Takes as much or as little of a feeding or meal or snack as desired

**Parent**
- Identifies hypoglycemia vs age-appropriate tantrum
- Teaches others about diabetes care and identification of hypoglycemia
- Provides feedings, meals and snacks at regular times over the day
- Allows child to eat as much or little as child wants

---

**Child 3-5 Years of Age**

**Parent**
- Performs almost all diabetes tasks
- Identifies hypoglycemia vs behavior issue
- Helps child to put a name to symptoms of hypoglycemia like, “head feels like a bubble”
- May start transition to administering insulin before meal

continued

**Child 3-5 Years of Age**

**Parent (continued)**
- Identifies hypoglycemia vs behavior issue
- Helps child to put a name to symptoms of hypoglycemia like, “head feels like a bubble”
- May start transition to administering insulin before meal

---

**Child 3-5 Years of Age**

**Child**
- Unable to recognize hypoglycemia
- Unable to understand the importance of eating, blood tests and insulin
- More involved in blood sugar testing
- Knows how much, of the foods offered by adults, to eat: none, some or even a lot

**Parent (continued)**
- Identifies hypoglycemia vs behavior issue
- Helps child to put a name to symptoms of hypoglycemia like, “head feels like a bubble”
- May start transition to administering insulin before meal

continued
Child 5-8 Years of Age  
**Parent**
- Continues to help child describe and caregivers identify and treat hypoglycemia appropriately
- Begins to turn over some diabetes self-management tasks to child
- Delegates some diabetes management to school personnel
- Does not expect child to fully understand the interplay of food, medicine and testing

**Child**
- Gathers and stores diabetes supplies
- With supervision, may be able to test blood glucose
- May assist with insulin administration
- Learns the names of foods
- Starts to identify carbohydrate foods
- Does not fully understand interplay of food/exercise/insulin but knows an extra snack is needed before gym

Youth 8-12 Years of Age  
**Parent**
- May need to require a blood sugar check if hypoglycemia suspected
- Parent and youth work out what diabetes tasks each will do and how parent will be kept up on overall care
- Continues to review blood sugar patterns
- Plans and prepares food with family input
- Determines menu/eating out and timing of meals and snacks around activities
- Parent attends to how she or he talks about own body and dieting
- Continues to offer opportunities for fun physical activities

**Youth**
- Monitors blood glucose
- Around 10 years of age, is able to prepare and administer insulin
- Decides what to eat of food offered
- With assistance, starts to apply label information to count carbohydrates
- With supervision, some youths will be able to participate in insulin dose decisions
- States type, dose and timing of medication
- Stores insulin properly

Youth 12-15 Years of Age  
**Parent**
- Is clear about expectations, especially for safety, when negotiating diabetes tasks with child
- Provides physical and emotional support and problem solving, as needed
- Continues providing meals and snacks at home
- Expects teen to manage after-school eating and come to the dinner table hungry
- Teach teen skills in food planning, shopping and cooking

**Younger Teen**
- Continues to negotiate with parent about diabetes tasks and how readings will be shared with parent
- Administers insulin
- Continues to need parental involvement
- Able to count carbohydrates and make own food choices
- Continues to work on skills: shopping, cooking
Parenting the adolescent with diabetes

Parents of the child with good control
- Maintain clear leadership
- Give the child warmth and respect
- Give child responsibility based scope for independence
- Give realistic mastery opportunities and expectations

Parents of the child with poor control
- Are either domineering or neglectful
- Find diabetes management to be burdensome
- Pressure children to manage their own diabetes

WHAT YOU KNOW STILL APPLIES

- Food management
  - Menu planning
  - Food composition

- Carbohydrate counting

SATTER FEEDING DYNAMICS MODEL

- Child’s eating capabilities are supported
- Insulin matched to CHO intake
  - Basal
  - Bolus dose
  - Correction dose

Supports good parenting
- Supports child’s mental and physical health
- Supports parents’ satisfaction and reward from parenting
- Support family’s social and emotional development
Goal: To raise a resilient child

Thank you from my heart.
Children and Adults with Diabetes whom I’ve had the honor to know
Fellow Diabetes Team Members, Diabetes Educators & ESI
Ellyn Satter, Ines Anchondo, Carol Danaher, Pam Estes,
Anne Blocker, Kerry Regnier
Edie Applegate, who 1st presented on DOR and Child Diabetes
and walked, talked and lived DOR wherever she went
Consultants: Gail Kellberg and Kathy Cashin
Adaption of Responsibilities for Parent and Child with Diabetes from
Understanding Diabetes, H. Peter Chase & David M. Maahs
Barbara Davis Center for Childhood Diabetes

FOR FURTHER READING…

Applies feeding dynamics principles to child overweight
Addresses
• Parenting
• Birth through adolescence
• Activity
• Social & emotional health