The feeding relationship

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The feeding relationship is the complex of interactions that takes place between parent and child as they engage in food selection, ingestion, and regulation behaviors. Successful feeding demands a caretaker who trusts and depends on information coming from the child about timing, amount, preference, pacing, and eating capability. An appropriate feeding relationship supports a child's developmental tasks and helps the child develop positive attitudes about self and the world. It helps him/her learn to discriminate feeding cues and respond appropriately to them. It enhances the ability to consume a nutritionally adequate diet and to regulate appropriately the quantity eaten. The feeding relationship is characteristic of the overall parent-child relationship. Distortions that show up in feeding are likely to appear in other aspects of the interaction. Dietitians who intervene with feeding must be aware of the implications for the relationship. A primary objective with any feeding intervention is to increase or protect the parents' sensitivity to the child's feeding cues. If the feeding relationship is disrupted, the dietitian should consider a referral for psychosocial evaluation.

The feeding relationship is the complex of interactions that take place between parent and child as they engage in food selection, ingestion, and regulation behaviors. Successful feeding demands a caretaker who trusts and depends on information coming from the child about timing, amount, preference, pacing, and eating capability (1,2). Feeding is successful when the parent attends to the child's rhythms and signals of hunger and satiety, works to calm the child, and develops mechanics of feeding that are effective with a particular child's emotional makeup and feeding skills and limitations (3).

Parental feeding behaviors (and the relationships they create) exist on a continuum, with positive and supportive behaviors on one end and grossly inappropriate control and insensitivity on the other. The negative extreme may be characterized by either domineeringness or neglect. In either case, the child's needs are met only coincidentally.

Dietitians who do nutrition counseling with children must be aware of the implications of their interventions for the feeding relationship. A primary objective with any feeding intervention is to increase or protect the parents' sensitivity to the child's feeding cues. Advice that encourages ignoring or overwhelming those feeding cues can be destructive to children's nutritional status, food regulation, and feelings about themselves and other people.

Broader significance of the feeding relationship

In the positive feeding relationship, mother and infant develop synchrony. They get to know each other; they are successful with each other. From the mother-child interaction children learn some important lessons. They gain awareness of what they are feeling, the knowledge that they are capable of conveying what they want, and trust that someone will be willing to provide that for them (4,5).

On the other hand, if the caretaker is consistently inaccurate or domineering about feeding, parent and child develop an asynchronous relationship; they are *out* of rhythm with each other and therefore unsuccessful. This is detrimental to both of them. The parent is confronted with a dissatisfied or an overly passive baby. The children grow up confused and anxious about their needs because what they want is so seldom accurately identified and gratified and so often in conflict with what the mother seems to want to give. As a consequence, the children gain little sense of effectiveness and feel that what they get is independent of their own actions.

Social and emotional learning is especially powerful with feeding. Parent and child spend much of their time together in the first year with feeding. During that early time, feeding is a concrete demonstration to the child of parental attitudes and expectations.

The child's increase in initiative

Bruch and Palazzoli (4,5) underscore the importance of the parent's role in helping children to discriminate their body cues. The authors speculate that an infant is aware only of positive and negative sensations. He or she cannot at first distinguish either the source or the solution. It is up to the sensitive caretaker to sort it out by identifying, in a reasonably consistent fashion, the child's problem and by offering the appropriate solution. Without fairly accurate

responses from parents, children do not gain self-awareness and remain confused about their sensations.

The growing child increases in self-knowledge and initiative. Positive, helpful feeding practices support developmental tasks at any age. In infancy, the child's task is to develop trust. During that stage, the parent appropriately accepts, supports, and satisfies the child's demands. Demand feeling, with reference to both timing and quantity, teaches trust.

During the toddler phase, children attempt to individuate—to experience themselves as separate persons. They become oppositional and depend on limits from the parents to help them with this developmental task. Appropriate parenting during that time demands the ability to set reasonable limits. The child should be given freedom and support, but it should also be clear that there are boundaries. Parents who can accept children's aggression and initiative help them avoid later developmental disorders, especially in the realm of eating (5). Almost every aspect of feeding, from quantity to food preference to tempo, gives the creative toddler an opportunity to test out the limits. Appropriate feeding limits include observing regular meal and snack times and expecting the toddler to behave reasonably well at the table.

During the preschool and early school-age years, the child's developmental task is integration. Children see themselves as individuals and set about getting better at interacting with others and performing tasks. Because children have established a firm sense of themselves, they can be more cooperative. Feeding provides opportunity for growth in eating skills, food acceptance, and socializing.

The integration process continues throughout the school years. In the adolescent phase, the feeding relationship is again put to the test. The adolescent pushes for more autonomy but at the same time seeks reasonable and supportive limits from the parents. Adolescents benefit from being allowed more freedom in food selection but also profit from being expected to attend most family meals.

Good nutrition depends on a positive feeding relationship

Optimal nutrition depends on the development of a positive relationship between parent and child. Children eat best when parents recognize and respond appropriately to their needs.

Brody (2) found that effective breast- or bottle-feeding mothers held their infants securely close to them during the feeding but still allowed them some range of movement. The mothers allowed the infants to set the tempo, talked and smiled to them while feeding (but did not overwhelm them with attention), avoided any behaviors that disrupted the feeding, and allowed the infants to decide when to finish. Allowing the child to retain control during the spoon-feeding phase enhanced food intake. Infant-controlled behaviors included waiting for the child's attention to be directed to each spoonful before trying to feed it to him or her and allowing the child to touch the food.

Satter (6) recommends a division of responsibility in feeding children. The parent must choose food that is safe and appropriate for the children and offer it in a positive and supportive fashion. The children are responsible for deciding how much, or even whether, they eat.

Slowly growing and "at risk" infants

On the basis of observations with failure-to-thrive children, Pollitt and Wirtz (7) surmised that maternal behaviors during feeding have an impact on children's ability to ingest food and on their subsequent weight gain. Mothers were observed working against a smooth feeding with activities such as frequently taking the nipple from the infant's mouth or continuously rotating or moving the nipple or grooming the infant's body. Infants of mothers who were too active ate less than infants of mothers who provided smooth, continuous feeding.

Crow et al. (8) found that mothers tended to be more active in feeding infants of low birth weight. The greater the mother's response, the less the small infant consumed, possibly because the activities were time-consuming and the infant ran out of energy. Certain behaviors indicated that mothers were ignoring infant behavior in feeding, such as pushing the nipple into the infant's mouth, even when the infant was looking the other way or had his or her mouth closed.

It appears that feeding practices and responsiveness to infant cues are important factors in failure to thrive. It has been hypothesized that neglected institutionalized infants fail to do well because of some psychologically induced deficit in absorption or metabolism (9). The hypothesis assumes they eat enough but simply cannot metabolize their food appropriately. However, Whitten et al. (10) found poor food intake to be a mediating factor. Caretakers failed to take time with infants to interpret their satiety cues and to be sure that they had finished feeding.

Ainsworth and Bell (1) found that certain behaviors were likely to produce underfed, underweight infants. Parents who underfed terminated feeding at pauses rather than giving the infant time to finish the feeding. They also interpreted the infant's fussiness as satiety, rather than soothing the fussiness and going on with the feeding.

Field (11) found that feeders tended to be more active with both premature and postmature infants. She surmised that the "at risk" designation and parental perception acted as stimuli to parents to increase their attempts to promote food intake. Pressure tactics included jiggling the nipple (and the infant) and forcing the nipple into the infant's mouth. Although Field did not monitor food intake, the aforementioned reports indicate that pressuring an at-risk infant to increase food intake, and thus growth, is a tactic that can backfire.

Rhythm in feeding

The pause in feeding appears important as a regulatory function that is optimally initiated and controlled by the infant. Kaye (12) observed that a mother commonly jiggled the bottle during the infant's pause from nursing. However, infants only went *back* to nursing after the jiggling stopped. Over the first 2 weeks, duration of the jiggling decreased. Kaye surmised from his observations that maternal jiggling was valuable less as a feeding intervention than as an early forerunner of the turn-taking behavior that is necessary for talking and communicating. He speculated that jiggling duration decreased as mothers

observed, probably intuitively, that babies went back to feeding more promptly after short intervention.

That very subtle feeding interaction has significance for the overall parent-child interaction. Brazelton et al. (13) discovered that infants gazed at their mothers longer when mothers allowed the infants to determine when they would look and when they would look away. If the mother withdraws or becomes intrusive when the infant looks away, it can interfere with their ability to establish a positive relationship with each other (14).

Older children

Parental pressure, even if it is positive, can affect a child's food acceptance. Birch and colleagues (15) found that preschoolers who were enticed with a reward to try a new food were less likely to go back to that food than those who were simply exposed to it and allowed to try it on their own.

The parent-child relationship appears to have an effect on the food intake of older children as well. Kinter et al. (16) found poorer quality diets in dysfunctional families—families that were too controlled, had too much unresolved conflict, and were over-organized and too cohesive. In earlier studies, Hinton and colleagues (17) found that the diets of teenaged girls decreased in quality as family interference and criticism related to eating increased.

Parent-child interactions influence food regulation

Children who are consistently frustrated or thwarted in feeding or who have food forced upon them when they do not want it, come to associate hunger not with pleasurable anticipation but with anxiety. If parents consistently overlook, ignore, or overrule cues coming from children, the children do not learn to experience, interpret, and trust their own reality. They do not know or respect their own signals of food regulation and learn to regulate feeding on the basis of interaction with the parent. Eventually they become embarrassed at their needs.

Bruch (4) observed the anorexic and morbidly obese children of domineering and oversolicitous parents and commented that "it seems that for them their ability to regulate the amount they eat lies outside of them."

Undereating and the parent-child interaction

A previous section described interactions that can decrease food intake or interfere with nutritional quality of the diet. Parents can be so insensitive to children's feeding cues that they do not get enough to eat.

This insensitivity can take the form of being overbearing. The mother who complains that her child "simply won't eat unless he is forced" is revealing a great deal about her own need to dominate and her child's need to defend himself against her pressure. Too much intensity (on both sides) can overshadow a child's need for food, and the child will eat and grow poorly.

Overeating and the parent-child interaction

The parent-child interaction can be a factor in a child's overeating as well. Birch and colleagues (18) observed that too-fat children got less appropriate attention from their mothers in the feeding situation. Obese children, as opposed to normal-weight children, were more demanding of their mothers' attention, mothers were less responsive to their overtures, and mothers used less appropriate interventions to keep them on task with their eating.

Some mothers treat too broad a spectrum of cues and signals as if they indicate hunger. Other mothers simply overstuff their infants with the intent of making them sleep a long time and thus demand little attention (1). As implied by the previous section, overstuffing requires a cooperative child; some will fight back.

In either case, the pressure to overeat must be considerable and continuous to overwhelm a child's food regulation abilities. Children can make up for fluctuations and errors in food intake. If they are overfed one time, they can simply spit up or wait longer to get hungry for the next feeding or eat less the next feeding or the next day.

Preventing obesity

Some parents withhold food from their children in an attempt to keep them slim. This tactic can promote the very problem it is intended to prevent. Children who are deprived of food become preoccupied with it and prone to overeat when they get the chance. Restrained eating, or habitual, virtually constant dieting, appears to help set up the pattern of using food to cope. Compared with "normal" eaters, people of all weights who are chronic dieters tend to overeat rather than undereat in response to stress (19). If children have been raised with restrained feeding, they are likely to continue those patterns and may also show periods of pronounced weight gain throughout life (4).

Parental concern about overfeeding and producing the too-fat child is potentiated if parents are anxious and ambivalent about their own eating. Obese women who are chronic dieters prefer thin infants and are concerned about preventing obesity in their children. They are more likely to use external cues, such as time and quantity, for regulating feeding. They also tend to overinterpret hunger in their infants (they feed rather than looking for other causes of fussiness) but spend less time feeding (20). Thus, their children are frustrated twice—once when they are induced to eat when they do not really want to and again when they are made to stop before they are completely satisfied.

Parents who are restrained eaters may attempt to curb and moderate the natural fluctuations in the amount their child eats. They may at times be overly austere and restrictive in the use of high-fat or high-sugar foods but at other times overly indulgent. At all times, eating may be invested with anxiety and preoccupation. As a consequence, a child's eating experience may be overly controlled, inconsistent, and emotionally charged.

Eventually, the parental attitudes and behaviors become internalized and perpetuated by the child. A history of parental fear of obesity and restrained feeding is very common among adult obese individuals. It may be that overreacting in childhood to modest or even anticipated excess fatness may in the long run actually increase the chances of developing adult obesity.

Eating disorders

In some cases, the connection between parental behavior and a child's nutritional status or food regulation is less clear than in the foregoing observations. A child's difficul-

ties with feeding and growth at times appear to be the product of poor emotional functioning of the parent and a disturbed family environment. Feeding difficulties and the underlying social and emotional distortions can be great enough to be defined as an eating disorder. That topic will be developed in a subsequent article (21).

Nutrition and the parent-child relationship

Poor food intake further erodes synchrony in parent-child relationships. Graves (22) found that there was less positive and appropriate psychological maturation in poorly nourished mother-infant pairs than in well-nourished pairs. Poorly nourished infants were more persistently demanding of their mothers, and the mothers were less appropriately responsive to them. Mothers were slow in paying attention and did so only in response to higher levels of attention-getting efforts from their offspring. Toddlers were less likely to go away from their mothers and return in an exploring-reporting fashion typical of the emotionally and physically healthy toddler.

Chavez et al. (23) observed that supplementing infants nutritionally improved synchrony between them and their parents. In a poor Mexican village, mothers and fathers of nutritionally supplemented babies expressed more pride and positive attention toward their babies than parents of poorly nourished offspring.

Feeding characterizes overall relationship

The type of interaction displayed in the feeding situation is typical of the parent-child relationship overall. Birch et al. (18) found that feeding interactions between child and mother were very similar to play interactions. Ainsworth and Bell (1) found that mothers who allowed their babies to participate actively in feeding scored higher on quality of maternal care variables. Those variables were: realistic perception of the baby, delight in the baby, acceptance of the baby, appropriateness of the interaction, amount of physical contact, and effectiveness of response to crying.

Ainsworth and Bell went on to observe infant attachment behavior at age 12 months in the same mother-infant pairs they had observed at age 3 months. Appropriate attachment behaviors at age 12 months include: expressing a clear preference for and attraction to the mother, ability to explore in a strange situation and use the mother as a secure base for explorations, and discomfort at separation from the mother. Babies of high-scoring and supportively feeding mothers showed more appropriate attachment behaviors.

Intervening in the feeding relationship

The dietitian can inadvertently put considerable pressure on the feeding relationship in the course of offering nutrition or feeding advice. The parent may interpret inquiries about the pattern of eating as pressure to get a baby on a schedule. Educating the parent about nutrition may induce her to use pressure tactics to get her child to eat vegetables. Presenting tactics of childhood obesity prevention to the obese mother may increase her ambivalence about feeding and encourage her to try to withhold food from her child.

It is essential that interventions with feeding in childhood be made with an awareness of the overall impact on the feeding relationship. A primary objective with any feeding intervention is to protect or increase the parents' sensitivity to the child's feeding cues.

Teach appropriate food selection

Foods offered to children must provide for nutritional as well as developmental needs. Appropriate feeding demands that parents be sensitive to a child's eating capabilities and nutrition needs (3,6). Teaching parents to base feeding on developmental readiness encourages them to depend on information coming from the child in making feeding decisions.

Once parents have offered their child appropriate food in a positive fashion, they can be reassured that their job is done. *They do not have to get their child to eat, and they should not try* (6). It is more likely that a child will accept a variety of food and regulate food intake well if parents simply offer the food in a positive and accepting fashion and avoid forcing, or even enticing, the child to eat.

Teach positive feeding skills

Positive feeding demands that a parent recognize and respect a child's feeding cues that indicate hunger, satiety, and food preference. Those cues can most readily be determined by the process of observation and trial and error. Specific techniques for "child-controlled feeding" are well supported by the literature reviewed earlier and are outlined by Satter in a feeding booklet for parents (24). Briefly, the parent is responsible for what is presented to the child to eat, as well as the physical and emotional setting. The child is responsible for how much is eaten or even whether anything is eaten. The parent does not have to get the child to eat or restrain his or her eating.

Generally, demand feeding is desirable in infancy. However, the sleepy, underactive, breast-fed infant who is growing poorly, as well as the mother, needs more stimulation to assure an adequate breast milk supply (6).

With older children the parent should take the lead in offering food. The child past early infancy benefits from being asked to attend regular meals and snacks.

Avoid intruding on food regulation

The infant and young child have the innate potential to regulate food intake on the basis of sex, size, growth rate, and physical activity. The adult's role is to support feeding so that internal cues of hunger, appetite, and satiety are disrupted as little as possible by outside interference (25). The dietitian can educate the parent about the natural processes of food regulation and growth (6). Depending on a child's ability to regulate food intake demands that a parent respect the child's prerogative of refusing food.

Children have innate tendencies toward a particular body build, exercise level, energy requirement, and pattern of food intake (25-28). They vary greatly in their day-to-day food intake and food acceptance (29,30). Parents should know that pressure or enticement is likely to backfire, whether they want their children to change their eating patterns or their growth. Overcoming innate tendencies is difficult and may not be justified (31).

Use anticipatory guidance in "at risk" feeding situations

Some feeding relationships are at particular risk. A child who is sick or small or has a congenital problem such as a

heart defect may call out urging-forcing feeding tactics in the parents. Neuromuscular anomalies (sometimes undetected) that make it difficult for a child to chew and swallow can wreak havoc with feeding and the feeding relationship (32). It is often difficult to initiate or to resume oral feedings after children have been maintained for extended periods on tube feedings or hyperalimentation without oral stimulation or eating experience. The mother who is a restrained eater or has considerable anxiety about her own eating or weight may not be willing or able to tune in on and gratify her infant's feeding cues (20). The parent may feel constrained to withhold food from the child who is perceived as too fat.

In all cases, parents need advice and reassurance about effective feeding tactics, establishing a supportive feeding relationship, and taking appropriate (but not harmful) responsibility in feeding (6,31,32).

Be aware of family dynamics when instituting modified diets

Some children require a modified diet, for instance, the diabetic child or the child with phenylketonuria. It is not clear why some families do well with dietary regimens and some do poorly (33). In many cases, it is the feeding dynamic rather than an understanding of the diet that determines the success or failure of a regimen. Dietitians should look at issues such as control and division of responsibility in feeding and pressure on feeding. Children learn quickly to react to excess parental pressure on feeding as well as to manipulate a parent's ambivalence about setting limits.

Research done on adherence to illness-managing regimens may provide a clue to dynamics involved in dietary adherence. Low parental self-esteem with consequent poor family functioning is correlated with poor diabetic control in children and a perception of diet as being particularly difficult to manage (34). Well-controlled youths report more cohesion, less conflict, and more independence among family members (35). In children with juvenile rheumatoid arthritis, high self-esteem and autonomy are correlated with medication compliance (36). In general, families in which parents exercise proper authority but still give a child a sense of responsibility do better in dealing with chronic illness (37).

Identify the destructive feeding relationship and refer

Feeding problems that result from lack of information or faulty information will respond to the type of teaching or behavior-change approach that is used by most dietitians. Feeding problems that occur secondary to a family's psychosocial disturbance are likely to yield only to psychological therapy. If significant problems persist despite application of a moderate educational and behavior change model, the dietitian should consider referring the family to a mental health worker for a psychosocial evaluation (21).

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