

FEELINGS®

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Guest Author for this issue of *Feelings and Their Medical Significance* is Ellyn Satter, MS, RD, ACSW, author of *Child of Mine: Feeding With Love and Good Sense and How To Get Your Kid To Eat... But Not Too Much* (Palo Alto, Bull Publishing Company, 1986 and 1987). Ms Satter's articles have appeared in the *Journal of the American Dietetic Association* and other journals, and she has lectured widely on childhood feeding disorders to parents and professionals. In 1989, a series of videotapes based on her books for parents became available. She is a therapist at the Family Therapy Center of Madison, Wisconsin.

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CHILDHOOD FEEDING PROBLEMS

For the infant and young child, nourishing is synonymous with nurturing. Symbolically, in terms of actual time spent, and in terms of consequences to normal growth and development, feeding is of primary importance during a child's early life. Problems in feeding concern the practitioner because they can impair food acceptance and growth. On a more profound level, however, feeding problems reflect a distortion in parent-child interaction, and this distortion interferes with the child's positive psychosocial development. This article summarizes current knowledge about the impact of feeding problems and the feeding interaction on children's physical, social, and emotional development.

Feeding and Development

Interactions involved in normal feeding propel an infant from a state of isolation and self-absorption to an active engagement with other people and the world.^{1,2} High-quality feeding interactions during the 1st years of life tend to be positively linked to the child's subsequent cognitive and linguistic competence and to more secure attachments to major caregivers.³ Distortion in feeding represents and impinges on the quality of these interactions.

Incidence. Problems with feeding have been variously categorized, depending on whether a child is normal and full term or suffers from gestational or organic limitations.⁴⁻¹⁰ It is estimated that 1% to 2% of infants and children suffer severe and prolonged feeding problems that impinge on growth,⁴ and that 25% to 33% exhibit more common difficulties such as food refusal and "overeating."¹¹

Children may show poor growth or nonorganic failure to thrive (NOFTT),¹¹ reactive or developmental (also called progressive) obesity,¹² colic,¹³ stressful or intensely conflicted feedings,¹⁴ poor food acceptance, refusal⁴ or inability to eat,^{9,15} unpleasant mealtime behaviors,¹⁴ failure to progress to appropriately mature eating styles,¹⁴ and psychosomatic conditions such as cyclical vomiting, diarrhea, and rumination.¹⁶

Persistence. Feeding problems established early in life can persist and generalize into other areas. Barnard et al³ found that mothers whose feeding interactions were less contingent, ie, less responsive to the child's signals, had infants who were less securely attached later in life. The persistence of early feeding problems has been noted in much other research, as well. Feeding

interactions in the early months are replicated in play interactions after the 1st year.¹⁷ Significantly higher frequencies of infections and behavioral problems are found among 2-year-old children who have early feeding problems.⁵ Two- to seven-year-old children with feeding difficulties are more fearful and aggressive and have more toileting problems.¹⁸ Most severely disturbed children show eating abnormalities.¹⁹

Struggles around feeding interfere with a child's ability to ingest a variety of food, regulate body weight, and achieve constitutionally appropriate growth. When parents introduce solids too early, ie, before the child shows signs of developmental readiness, the child and the parents struggle over the process of eating, and the child shows poor acceptance of solid food.²⁰

Toddlers are naturally neophobic about new foods, but accept most foods with repeated neutral exposure.²¹ Toddlers and preschoolers are less accepting of new foods when they are rewarded or otherwise pressured to eat them,²² but more accepting when they get social support at eating time.²³ School-aged children eat best when they are a part of functional families,²⁴ and their food choices reflect those of their parents and siblings.²⁵ A study of children ages 2 through 7 years found that those with problematic eating had less exposure to novel foods, were likely to be prodded and rewarded for eating and punished for not eating, and were likely to have developed conditioned taste aversions.¹⁸ Adolescents ate less well when they were subjected to family interference and criticism.²⁶

Infants eat less well when parents are overactive and over-managing in feeding, and best when parents work to calm them and feed in a smooth and continuous fashion.^{17,27-29} It has been observed that parents of slowly growing children terminated feeding at pauses in feeding rather than after checking for satiety,³⁰ and that when parents fed in an arbitrary or peremptory fashion, children were too thin or too fat.^{17,31}

In 50% of 42 infants followed for feeding difficulties, the problem persisted at the age of 2 years, and children who refused to eat showed significantly lower growth in height and weight than the control group.⁵ Children who had been hospitalized for NOFTT an average of 12.5 years previously were smaller in height and weight, had poorer language development, and showed lower social maturity and a higher incidence of behavior disturbances.³² A longitudinal study of 185 children found that children who were obese at age 16 years were significantly more likely to have had feeding difficulties during their early months.³³

Causes of Feeding Problems

Problems in feeding, growth, and food acceptance may stem from any or all of the following:

- 1) Medical or physical condition of the child
- 2) Inappropriate food selection
- 3) Inappropriate dynamics around feeding

The first two causes have been well-treated elsewhere,^{34,35} and are commonly included as part of a diagnostic workup. Although disrupted feeding dynamics may cause problems or potentiate organic difficulties, examination of dynamics around feeding is

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generally not a part of routine practice. Of 1,120 infants with growth failure, 40% to 50% were found to have nonorganic etiology and/or to have feeding problems.³⁶ To include an evaluation of feeding as part of a diagnostic workup is likely to eliminate the need for much laboratory testing. Of 2,067 laboratory tests administered to 185 children admitted to Children's Hospital in Buffalo, New York, with NOFTT, only 36 tests (1.4%) were of positive diagnostic significance.³⁷

Feeding is a reciprocal process that depends on the abilities and characteristics of both parent and child and is shaped by their mutual accumulated history.^{3,17,27} For optimal interaction between parent and child, parents must be emotionally healthy, sensitive, and responsive. The child should be able to master the mechanics of feeding and achieve a minimal level of stability and communication: The child can be calmed and can display readable feeding cues.

Evaluation of newborn feeding interactions can be readily accomplished using Price's AMIS scale,³⁸ Chatoor's Observational Scale for Mother-Infant Interaction during Feeding,³⁹ or Barnard's Nursing Child Assessment Feeding Scale.⁴⁰ Chatoor's scale may be used for evaluation of feeding dynamics in children up to age 3 years. In general, interactions assessed are of the nature of those described in Tables 1 and 2. Scores of feeding dynamics correlate well with overall evaluations of parent-child interaction.^{3,41}

What Is Optimal Feeding?

To resolve feeding problems, it is first necessary to identify the optimal feeding. I have described⁴² and demonstrated⁴³ feeding dynamics in detail elsewhere. Infants have considerable capability in food regulation and eating. They are interested in eating and invested in their own survival. They instinctively suckle and take in nourishment. They can regulate their food intake⁴⁴⁻⁴⁷ and grow in a way that reflects their genetic endowment. They naturally consume a variety of foods.^{48,49} They are driven by their internal developmental processes to progress from suckling to taking semisolid foods to mastering increasingly difficult foods and eating styles.⁵⁰ Furthermore, these capabilities are not fragile. It is normal to eat and grow normally.^{34,51} It takes considerable interference to disrupt children's capability in food acceptance and regulation.

To manifest their eating capability (as well as to develop in other ways), however, children need appropriate supports from parents. Effective feeding requires a synchronous relationship between parent and child in which the parent's and child's behaviors are mutually contingent.^{14,17,27,52} The parent must acknowledge and respect the child's capability and autonomy, but also provide the proper food, in a form the child can manage, in a social environment that is loving and accepting.

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Table 1. Parent Behaviors That Support Homeostasis and Attachment

- Follow the baby's signals about what time to feed.
- Feed promptly when the baby is hungry, before the baby becomes aroused from heavy crying.
- Hold the baby securely but not restrictively.
- When using a bottle, hold it still at an appropriate angle; don't jiggle the bottle or the baby.
- Be sure the nipple flows at an appropriate speed.
- Stimulate the rooting reflex by touching the baby's cheek.
- Touch the nipple to the baby's lips and let the baby open his or her mouth before feeding.
- Let the baby decide how much to have, and at what tempo.
- Let the baby pause, rest, socialize, and go back to eating.
- Talk and smile, but don't overwhelm the baby with attention.
- Burp only if the baby seems to need it; don't disrupt feeding with unnecessary burping and wiping.
- Stop the feeding when the baby refuses the nipple or indicates satiety and lack of interest in eating by turning away, refusing to open the mouth, or arching the back.

If parents are overmanaging or insufficiently supportive, feeding as well as psychosocial development is likely to be disrupted. Unless they get positive rewards for their efforts, children's normal drive for development is blunted or transformed into non-productive struggles with parents.

Positive approaches to feeding allow a child to accomplish developmental tasks at any age.⁵³ Feeding the newborn goes best when parents adjust their approach to the infant's timing, preference, pacing, and eating capability.¹⁷ Such contingent interactions enhance the newborn's ability to achieve regulation of state and later firmness of attachment.³ Successful regulation of state and attachment provide the groundwork for the separation-individuation phase that begins at about 6 months of age and that, in turn, allows for later psychosocial development. Parental feeding behaviors that support homeostasis and attachment, on the one hand, and separation and individuation, on the other, are outlined in Tables 1 and 2.

Feeding requires a *division of responsibility* between parent and child: The parent is responsible for *what* the child is offered to

Table 2. Behaviors That Support Separation and Individuation

- Feed when the child wants to eat, but gradually evolve a time structure that is appropriate for everyone in the family.
- Seat the child straight up and facing forward.
- Sit directly in front of the child.
- Hold the spoon so the child can see it.
- Be engaging but not overwhelming; take care not to overload the child with talking or behavior.
- Talk in a quiet and encouraging manner.
- Wait for the child to open up and pay attention before feeding.
- Let the child touch the food and eat with fingers.
- Let the child self-feed when ready.
- When the child is self-feeding, remain present in the situation, but don't take over.
- Let the child decide how fast to eat.
- Let the child decide how much to eat.
- Respect the child's food preferences.
- Respect the child's caution about new foods.
- Remember, all children learn to eat eventually.

eat, the child is responsible for *how much*.⁴² Parents must provide an appropriate milk feeding,⁵⁴ but they must allow the infant to regulate the amounts. Parents must offer solid foods in response to signs of developmental readiness,⁵⁵ but they must let their child take the initiative in accepting foods.

Parents must provide the toddler with appropriate food and feeding structure and limit negative behaviors during meals; on the other hand, parents must allow the child to decide how much and whether to eat.⁴² Such structure and limit-setting are essential to provide opportunities for children to mature in food acceptance, and to learn the social behaviors expected during the process of eating.

The patterns established in the toddler period build an essential framework for children and their eating that will persist throughout the child's developmental years. Children need the support of regular and reliable meals and snacks, and they need the limits of not being allowed to beg for food handouts or dictate the family menu. With eating, as with other interactions between parent and child, it is frightening for children when parents fail to provide them with structure and discipline.

Resolving Feeding Problems

To resolve feeding problems, it is first necessary to diagnose underlying causes that put pressure on the feeding situation. Any pressure tends to be passed along to the child in the form of overmanaging, insensitive approaches to feeding.

At times, causes may be indirect. For example, an obese grandmother died of heart disease, and the parents became hesitant to gratify the hearty appetite of their robust 2-year-old daughter for fear she would develop the same conditions. The child, in turn, reacted to food deprivation by becoming preoccupied with food and prone to overeat whenever the opportunity presented itself. The parents viewed the problem as their daughter's overeating, and sought help in limiting her food intake; however, looking at

the problem in such a simplistic way would have only increased the pressure on the child. The problem was not that she was incapable of regulating her food intake, but that the parents' grief and anxiety led them to interfere with her capability in that area.

As that case illustrates, the history and characteristics of the child and parents interact within their environment, and both may share a history of distorted interactions and emotional dys-synchrony that continue to put pressure on the feeding situation. When the feeding relationship gets a negative start, subsequent stages continue to be distorted as both the child and the parents carry along the feelings, behaviors, and interactions of unresolved developmental tasks. The parents may overcompensate in an attempt to resolve their distress, or withdraw from what has become an unsatisfying interaction.

Parents can be insensitive, unsupportive, or overmanaging because they are ill, or because they have insufficient knowledge about nutrition, feeding, and development, or because they have limited skill and organizational abilities, or deficits in psychological functioning. Conversely, a number of circumstances can lead children themselves to precipitate overmanaging in their parents, or to exacerbate their parents' problems: These circumstances may include the child's own functional limitations, unattractive temperamental or physical characteristics, a labile or immature nervous system, or a limitation in the ability to communicate. Moreover, feeding problems can be caused by environmental effects such as socioeconomic stress; a lack of situational or emotional support; a crisis in the family, job, or social network; or poor advice on feeding from friends, relatives, or even professionals.

In defining and managing feeding problems, I find it helpful to use the public health model of primary, secondary, and tertiary prevention. Interventions may emphasize prevention by building positive feeding interactions; interventions may also promote early detection and management or provide treatment for established problems.⁵³

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Primary Prevention

For normal children. At a primary level, most problems around feeding can be prevented by routine support and education about feeding and parenting in the physician's office. Parents need to learn how to establish a contingent relationship with their child around feeding, how to select appropriate food, and how to establish comfortable feeding styles. They also can be helped to become aware of the child's eating communications and capabilities and normal growth processes.

I have described in detail and illustrated on videotape⁴³ approaches to establishing positive feeding interactions between parents and normal children.⁴² Parents of children with functional problems or eating or growth idiosyncracies require anticipatory guidance to prevent feeding problems. Likewise, parents who are particularly concerned about growth, wellness, or body weight are at risk for distorting feeding interactions and would benefit from primary prevention.⁵⁶

For children with organic deficits. Skillful management, with evaluation and planning from the onset of oral feeding difficulties, allows primary prevention of feeding problems in children who have organic deficits. Complete or partial nutritional support may be maintained by nasogastric or gastrostomy tube feedings when children's energy needs outstrip their ability to ingest food. At "feeding" time, parents and other care providers can interact with the child, giving partial oral feedings or, if the child is unable to feed orally, giving nipple and/or oral stimulation. This approach preserves the child's feeding skills and maintains the cognitive and emotional stimulation of the feeding interaction.

If tube feedings can be timed to coincide with the child's hunger and satiety, the feeding situation becomes even more reinforcing. Social interactions and oral stimulation are paired with the powerful relief and pleasure from relief of hunger. Using this preventive approach, children with cystic fibrosis,⁵⁷ congenital heart disease,³⁴ cerebral palsy,⁹ and high-risk infants in the intensive care setting (and their parents)⁵⁸ can continue to benefit from the feeding interaction.

For medical reasons, however, many children are maintained on continuous drip feedings, so they never get hungry and never get full. As a consequence, they are not motivated to eat. Even when bolus feedings are initiated, these children experience difficulty in recognizing and responding to hunger and satiety.⁵⁹ They must learn to pair certain feelings of discomfort with hunger and certain feelings of relief and pleasure with satiety.

It is extremely important to initiate oral motor treatment early. Even if oral feeding is not the source of nutritional support, the child can receive oral stimulation during feeding and thus begin to make the connection between what happens in the mouth and what happens in the stomach during feeding. As soon as a child is capable of sucking and can swallow a small amount without aspirating, the oral motor skills are at least partly in place for the transition to oral feeding.⁵⁹ But once critical times for developing normal eating skills, attitudes, and interactions are missed, they are extremely difficult to reconstruct.

Furthermore, oral feeding is centrally important to the child's normal emotional and social development.^{1,2} Dowling² found characteristic psychomotor deficits in otherwise healthy children with esophageal atresia who had been deprived of early nipple experiences. They lacked motivation, vitality, intentionality, and mastery. Children showed a lack of sustained, exuberant pleasure in their contact with the environment.

Secondary Interventions

Early detection of feeding difficulties is essential to secondary prevention. Growth must be charted regularly and carefully, and minor shifts used as a basis for inquiry about feeding dynamics. If parents perceive feeding as stressful or unsatisfying, it is cause for intervention, even if growth is not affected. At a secondary level

of intervention are feeding problems that appear in the context of otherwise accepting and responsive parenting. These problems are likely to yield to systematic exploration and problem-solving in the pediatrician's office. Referral to a registered dietitian can be made if more detailed instruction and problem-solving are needed. The child who eats or grows at the extreme may motivate parents to put pressure or controls on feeding. Such controls are unnecessary and even counter-productive. Fat infants don't necessarily eat too much, and thin infants don't necessarily eat too little.⁶⁰ Fat infants are no more likely to grow up fat than thin infants.^{33,61}

Problems at a secondary level may also grow out of particular needs or organic conditions of the child that require special handling. Premature infants were less responsive and more disorganized than full-term infants⁶² and tended to develop feeding difficulties.⁶³ Babies who were born small for gestational age tended to be more behaviorally compromised in feeding than babies who were born prematurely but appropriate for gestational age.^{64,65}

Parents of children who were perceived as "at nutritional risk" tended to be overactive in feeding, had difficulty achieving synchrony with children in feeding, and showed a preponderance of forcing, overmanaging feeding tactics.^{29,66} Parents of prematurely born infants frequently failed to adapt food selection and feeding methods to the child's specialized nutritional requirements and delayed developmental cadence.⁶⁷

Often, difficulty in feeding is the first sign that a child is functionally compromised. Children may demonstrate minimal neurological abnormalities, hypersensitivity, or low muscle tone. Children may also have impediments to eating, such as unidentified food sensitivities, gastroesophageal reflux, or pronounced oral hypersensitivity.⁵⁹ If the problem persists after positive feeding dynamics are instituted, it is important to look in detail at the child's physical functioning.

Tertiary Interventions

At a tertiary level of intervention are well-established feeding problems. These are frequently refractory to treatment. They are characterized, at one extreme, by heightened feeling and extreme tension and rigidity or, at the other extreme, by marked remoteness, lack of concern, and absence of structure and support. Difficulties around feeding are likely to be characteristic of family interactions overall.

Often, tertiary problems are potentiated by distorted family dynamics. I call problems at this level childhood eating disorders.⁶⁸ Minuchin et al⁶⁹ speak of psychosomatic disorders of childhood, and Fosson and Wilson⁷⁰ identify them as distorted family interactions surrounding the child with NOFTT.

Many parents respond dysfunctionally to a child's illness. In time, most families cope by reorganizing to manage the crisis. Others reorganize in non-productive ways around the child and the illness and fail to cope. Parents at the tertiary level of involvement are likely to be so overwhelmed by processes going on outside or within themselves that they are not able to be sensitive and responsive to the needs of the child. To be able to institute positive change, it is first necessary to bring the parent into the range of optimal functioning. To do so may require a social services referral to help the parent cope with overwhelming social and economic circumstances, or a mental health referral to help the parent deal with depression or the intense need to control.⁵³

It becomes apparent that the problem is at this level when generally helpful interventions with parenting, nutrition education, and problem-solving don't work. For example, a 16-month-old would only initiate eating solid foods and drinking from a cup when she was distracted by toys. Toward the end of feedings, she ate willingly. The child had been born with neuromuscular dysfunction of the mouth and throat, and had suckled but seemed unable to swallow or retain food. At age 3 months she was hospitalized for failure to thrive and had a gastrostomy tube

installed; she had been predominantly tube fed since that time. She had continued to use a pacifier, and had begun spoon feeding, with moderate success, at age 7 months. Medical and nutritional evaluations revealed no continuing problems in those areas.

Our hypothesis was that the child was experiencing a moderate food phobia: Her negative and avoidant feelings about eating were gaining supremacy over her positive approach feelings. Her parents were understandably concerned and anxious about her food intake and normal growth and development. To relieve pressure on them, her parents were instructed to continue nutritional support by gastrostomy tube and were oriented to the considerable ranges and variation in food intake to be expected from a child this age.^{34,71} They were also helped to see the indicators that their daughter was interested in eating and showed considerable capability in eating.

The task was to help the child learn to manage her anxiety so she could voluntarily take in food. The mother was instructed to offer the child spoonfuls of food, but wait for her initiative before attempting to feed her. If the girl did not eat after a reasonable time, the mother reassured her that she didn't have to eat and she was cheerfully put down. After six meals of angry yelling, glaring at her mother, and pursing her lips, the child aggressively removed the spoon from her mother's hand and began to eat willingly. She continued to feed herself, although she remained easily distracted from her eating.

This entire process was, understandably, extremely painful for the mother, and she continued to be hypervigilant of amounts and types of foods the girl ate and to relapse to the old way of feeding when her daughter's food intake decreased below the mother's comfort level. Further exploration revealed that the attachment phase had been disrupted for this mother and child and that both were struggling with separation and individuation. These issues had to be resolved to allow feeding to develop in a positive fashion.

The hypothesis of mild phobia was dictated by the girl's capability and willingness to eat and her moderately negative reaction to food. This hypothesis was substantiated by her ability to take the initiative in resolving the problem herself as soon as she was placed in a positive feeding environment with appropriate maturity demands. However, for some children, internal processes that interfere with food intake could simply be too powerful for that. The child with bronchopulmonary dysplasia whose mouth and throat have been traumatized by life-sustaining apparatus and deprived of early eating experiences can be extremely phobic about eating: One such child vomited when food was only brought into the room.

Treatment

For functional families dealing with common difficulties, I have outlined a self-help approach.⁴² The same approach can be administered by health care professionals with problems at a secondary level. Also at a secondary level, Taubman¹³ describes successful treatment of colic by teaching parents to be more attentive to their infant's cues. Morris⁵⁹ adapts acquisition of feeding skills to developmentally delayed children. Perske et al⁷² address the mechanics and emotional and social issues in feeding persons with severe handicaps.

Problems at a tertiary level require more specialized handling. Assessment and treatment of children with feeding problems that grow out of disruption of the normal developmental processes of homeostasis, attachment, and separation-individuation have been described by Chatoor.⁷³ Wright⁷⁴ outlines multidisciplinary assessment and treatment of severely dysfunctional families, including families of children with NOFTT.

Other researchers have evaluated and treated children with severe behavioral distortions around eating. Their recommendations include desensitizing training for eating phobias,⁸ treatment of eating problems secondary to developmental delay or neuromuscular deficits,¹⁵ and treatment of psychosomatic problems of rumination and cyclic vomiting and diarrhea.¹⁶ In each of these

approaches to treatment, practitioners look for what interferes with eating mastery and work to activate the child's normal drive to eat and to achieve mastery. The child who refuses to eat may be fighting back in an overmanaging environment. The child who ruminates may be withdrawing from a non-reinforcing environment and self stimulating.

Other programs supply motivation from outside the child to initiate eating and assume that once eating is in place it will be intrinsically motivating. I do not recommend such programs because they are likely to increase negative feelings about what is already a negative experience for the child. At times such programs are used when the condition is seen as life-threatening and the child and family are unresponsive to a more collaborative approach. Extrinsic motivation is used by clinicians who force children to eat,⁷⁵ reward eating,⁷⁶ or negatively reinforce food refusal, ruminating, or vomiting.^{8,77}

Outcome

Eating is a complex behavior with skills and attitudes that are learned slowly, over time. Treatment of eating problems or dysfunctional eating relationships is also a slow and progressive process, and its outcome must be adjusted to the temperament and capability of the child. If necessary, other means of nutritional support—such as tube feeding—can be productively maintained to buy time while the therapist, parent, and child develop improved eating skills without pressure.

For the normal child, if the relationship around feeding is positive and the food is appropriate, the child will eat and grow, although the amount and range of food may remain limited. For the child with neuromuscular deficits, interventions based on what the child needs and is ready for can help the child develop the capability of using the mouth for exploration and communication. Even with the most considerate, developmentally appropriate interventions, however, such children may not progress to total oral feeding.¹⁵

The focus in feeding should not be on getting food into the child. Such a focus puts pressure on the feeder and on the child and produces tactics that are preemptive of the child's initiative and therefore disrespectful of the child. Such pressure tactics limit the child's possibility for success and instill long-term negative eating attitudes and behaviors.

Instead, the focus should be on the feeding relationship and on the achievable goal of helping the child learn eating skills and positive behaviors around eating. The principle underlying all interventions is to establish a smooth and congenial relationship around feeding that is appropriate for a child's developmental stage, nutritional needs, and neuromuscular development.

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