



The Consultative Group on Early Childhood Care and Development

# A DEVELOPMENTAL CLASSIFICATION OF FEEDING DISORDERS IN THE FIRST 6 MONTHS OF LIFE

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This article is adapted from I. Chatoor, S. Schaefer, L. Dickson, and J. Egan, "A Developmental Approach to Feeding Disturbances: Failure to Thrive and Growth Disorders in Young Children." *Pediatric Annals* 13 (11), November 1984.<sup>1</sup>

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A developmental classification system for feeding disorders associated with failure to thrive has recently been developed. In the first six months of life two distinct stages of feeding problems—categorized as disorders of homeostasis and attachment—have been described. A description of each of these disorders will be discussed below.

## *Disorders of Homeostasis*

From birth to two months the task of the infant is to achieve the ability for state regulation, or homeostasis. The infant must be able to form basic cycles and rhythms of sleep, wakefulness, feeding, and elimination. In feeding situations, a progression from reflexive sucking to autonomously motivated oral feedings is observed. Feeding problems of this stage that are directly related to characteristics of the infant include: lability of autonomic nervous system, difficulty in

state regulation, and hypersensitivity to stimulation. Another feeding problem of this early infant period involves a developmental delay in coordination of the oral musculature and in integration of breathing and sucking. Infants with respiratory problems, especially premature infants, may also have difficulty achieving homeostasis. Rapid respiration or intubation frequently prohibits oral feeding. Consequently, such infants do not make the transition from reflexive to autonomously motivated sucking. When introduced to oral feedings, they frequently don't know how to suck or swallow and have little awareness of hunger or satiety. Other infants having difficulty with homeostasis are those with congenital abnormalities of the gastrointestinal tract.

In facilitating the establishment of homeostasis in these infants, the caregiver plays a critical role. She must be able to provide both a physical and emotional environment in which the infant can balance and regulate both internal and external stimuli. Unable to interpret her infant's cues, the mother may under- or over-estimate the infant. More importantly, the mother's anxiety, isolation, and lack of emotional support may intensify the infant's difficulties. It is important to note that too much or too little stimulation during these first two months can disorganize even a healthy infant, and this disorganization in turn can lead to irregular feeding patterns. Table 1 summarizes the diagnostic criteria for disorders of homeostasis.

## *Disorders of Attachment*

Having obtained the capacity for self-regulation or homeostasis, the adaptive infant is able to mobilize and engage in increasingly complex forms of interaction. Between two and six months, the infant sets out to achieve the major psychological task of attachment. Attachment develops within a reciprocal relationship with the mother and includes mutual eye contact, reciprocal vocalizations, and closeness expressed through cuddling and nestling. At this period, factors related to the infant, mother, and environment can inhibit this process.

At this age most of the infant's interactions with the caregiver occurs around feedings. Thus, the regulation of food intake is closely linked to the infant's relationship with the caregiver. Certain feeding disturbances are characteristic of disorders of attachment. Infants failing to thrive as a consequence of impaired attachment frequently present with a history of vomiting, diarrhea, and poor weight gain. Observation of those mothers and babies during feeding reveals a general lack of pleasure in their interactions. The mothers appear listless, detached, and apathetic. They hold their babies loosely on their laps without much physical intimacy. They rarely initiate verbal or visual contact, and seem unaware of the infant's behaviors. A wide range of variables have been considered in describing the maternal characteristics and social environments of these infants, including maternal depression and apathy, under-nutrition, isolation and lack of support, poverty and the resulting stress from the burden of multiple familial and economic responsibilities.

These infants also appear listless and apathetic. They often actively avoid eye contact with the mother. Some engage in rumination, which appears to be either a means of self-stimulation or of relieving tension. Some infants seem to be "hypervigilant" when scanning the environment, a process that has been described as radar gaze. When these babies are picked up they are unable to cuddle and mold to the caregiver's body. They usually show disturbance in body tone and are

floppy or rigid. Many of these infants show evidence of delay in other areas of social, physical, and cognitive development.

Certain individual infant characteristics can contribute to or exacerbate an attachment disorder. Infants who have problems with self-regulation, who are irritable and difficult to calm, and whose temperamental attributes are confusing or upsetting to the mother pose a threat to the attachment process. Infants with hypersensitivity to touch, sound, or change of position are especially vulnerable to an attachment disorder because their avoidant behavior can easily be misinterpreted by the mother as rejection. On the other hand, a depressed mother can easily leave infants who are passive and make few demands on the caregiver alone. Table 2 summarizes the criteria for disorders of attachment.

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*Table 1*  
*Diagnostic Criteria for Disorders of Homeostasis<sup>2 3</sup>*

Feeding difficulties may stem from primary constitutional characteristics or organic differences of the infant. Mothers are often unable to help the infant because of their inexperience or anxiety. Feeding problems may stem primarily from the mother's inability to read the infant's cues of hunger or satiety and her lack of ability to help the infant establish a regular feeding pattern. In some cases there will be a combination of infant vulnerabilities and maternal factors adding to each other and resulting in severe feeding problems.

*INFANT*

*MOTHER*

**Age of Onset:** Birth to 2 months; beyond the first 2 months of life, if the infant has organic problems that delay the introduction of oral feedings.

**Common Contributory Organic Factors:** Respiratory distress prohibiting or limiting oral feedings; anatomic problems of the gastrointestinal tract interfering with oral feedings (i.e. esophageal atresia, duplication of the gastrointestinal tract, necrotizing enterocolitis); delayed maturation of the coordination of the oral musculature; delayed integration of sucking and breathing.

**Temperamental Vulnerabilities:** Hypersensitivity resulting in excitability and irritability; passivity associated with short periods of alert wakefulness.

**Common Psychosocial Stressors:** No specific outside stressors; frequently stressed by the infant's organic or temperamental difficulties and their impact on her maternal self-esteem.

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**Development:** Primary delay in gross motor area, less in fine motor development; delay in speech development.

**Predominant Affect:** Hypersensitive and irritable or passive and sleepy dull affect.

**Common Interactive Behaviors with Mother:** Cries, does not calm or nestle when held; appears sleepy in responses; is difficult to engage.

**Common Feeding Behaviors:** Has poor suck, tires easily and may fall asleep after short feeding; gags easily, spits up and vomits frequently; cries during feeding; takes inadequate amounts of milk; has irregular and unpredictable feeding pattern.

**Predominant Affect:** Appears anxious, easily distressed, or depressed and overwhelmed.

**Common Interactive Behaviors with Infant:** Misses or overrides the infant's signals; responds with under- or over-stimulation and projects negative attributes to the infant's behavior.

**Common Feeding Behaviors:** Misreads the infant's cues of hunger or satiety; feeds in erratic manner, burps and changes the infant's position frequently; handles the infant excessively; fails to establish a consistent feeding pattern.

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Table 2  
Diagnostic Criteria for Disorders of Attachment

Feeding difficulties stem from problems in mother-infant reciprocity, a lack of engagement between mother and infant. Since at this point of development much of the infant's interactions with the caretaker occur around feedings, regulation of food intake is closely linked to the infant's affective engagement with the caregiver.

*INFANT*

*MOTHER*

**Age of Onset:** 2 to 6 months.

**Common Contributory Organic Factors:** Prematurity or any illness requiring prolonged hospitalization and separation from mother; organic illnesses that result in homeostatic difficulties of the infant.

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**Temperamental Vulnerabilities:** Passivity, and low responsiveness; low stimulus barrier resulting in excitability and irritability.

**Development:** Poor regulation of muscle tone, weak grasp, weak cry; general delay in fine-motor and gross-motor development; delay in speech development.

**Predominant Affect:** Appears sad, withdrawn, or hypervigilant (radar gaze).

**Common Interactive Behaviors With Mother:** Avoids eye contact; does not vocalize, does not smile, shows no anticipatory reaching out (in infant older than 5 months) stiffens or arches away when picked up; does not mold or cuddle when held.

**Common Feeding Behaviors:** Feeds and eats without difficulty as mother; might spit up or vomit frequently; might ruminate; looks away from mother during feeding.

**Predominant Affect:** Appears detached, depressed or agitated, hostile.

**Common Interactive Behaviors w/Infant:** Appears detached; fails to engage infant visually or vocally; holds infant loosely without physical closeness; does not respond to the infant's cues or needs; interacts with infant according to her own projected needs.

**Common Feeding Behaviors:** Drinks milk mechanically or props bottle; holds infant loosely away from her body; does not seek visual engagement and does not talk to infant during feeding; is unaware of infant's nutritional needs.

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Table 3  
Early Infant Reflexes

<i>Reflex</i>	<i>Description</i>	<i>Disappearance</i>
Rooting	When the infant's cheek is touched she will turn her head in the direction of the touch and open her mouth, as if seeking something to suck on or eat. Rooting is hard to elicit when the infant is satiated.	Disappears by 3 to 6 months
Stepping	When someone holds the baby upright with her feet touching a surface and moves her forward, the baby will make rhythmic stepping movements, as if walking.	Disappears by 1 to 4 months

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Sucking	When the baby feels something in her mouth, she sucks on it. This reflex is sometimes hard to elicit when the infant is satiated.	Becomes a sucking skill by 2-3 months
Tonic	When an infant is placed on her back, she will turn her head to one side and extend the arm and leg on that side while flexing the other arm and leg.	Gradually disappears by 2-10 months
Babkin	When the baby is lying on her back and pressure is applied to the palms of both hands, the baby opens her mouth, closes her eyes, and brings her head to face front at the midline of the body.	Weakens after 1 month; disappears by 3 months
Crawling	When an infant is placed on her stomach and pressure is applied to the soles of her feet, she makes rhythmic movements of her arms and legs, as if crawling.	Disappears by 3 to 4 months
Grasping	When something is pressed against the infant's palm—a finger, for example—the infant will tightly grasp the object.	Weakens after 3 months; disappears by 11 months
Moro	When someone holding the baby lets her head drop a few inches, or when there is a sudden loud noise, the at baby first throws her arms out, then brings them back toward her body, with her hands curling, as if to grasp something.	Easily elicited before 3 months; disappears at 7 months

## Endnotes

<sup>1</sup> An expanded version of this article appears in Dennis Drotar, (Ed.), *New Directions in Failure to Thrive*. New York: Plenum Press, 1985.

<sup>2</sup> The characteristics described in Tables 1 and 2 have been derived through clinical observation and are undergoing further investigation by the authors.

<sup>3</sup> The tables appearing in this article have been modified from those that appeared in the original text.

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*Early Childhood Counts: Programming Resources for Early Childhood Care and Development.* CD-ROM. The Consultative Group on ECCD. Washington D.C. : World Bank, 1999.