
بِسْمِ اللَّهِ الرَّحْمَٰنِ الرَّحِيمِ
In The
Name Of
GOD

PEDIATRIC EATING / FEEDING DISORDERS

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ICD-10 codes for Pediatric Feeding Difficulties

- The International Classification of Diseases (ICD) added two new diagnosis codes for pediatric feeding disorder (PFD): R63. 31, acute PFD (present for less than three months) and R63. 32, chronic PFD (present for three months or more).
- ICD-10 code R63. 3 for Feeding difficulties is a medical classification as listed by WHO under the range - symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified .

What is the difference between an eating disorder and a feeding disorder?

- Eating disorders are a range of psychological conditions that cause unhealthy eating habits to develop. They might start with an obsession with food, body weight, or body shape.
- While eating disorders are not really about the food, but rather a coping mechanism gone wrong, feeding disorders actually are more often the direct result of food preferences or perceived intolerances.

- When a feeding issue presents in a child before the age of six years, this is categorized as a feeding disorder, rather than an eating disorder.
- Feeding disorders can occur in infants, toddlers, and elementary-aged school children for a variety of reasons and causes, such as an associated medical condition or developmental disorder.
- Feeding disorders can potentially lead to dangerous medical consequences for the infant or child, including failure to thrive, lack of growth, and malnutrition.

Feeding Disorders Versus Eating Disorders in the Pediatric Population

- A child dealing with a feeding disorder may present with varying symptoms, including but not limited to choking, vomiting, or gagging while eating or attempting to swallow, selectivity and pickiness with foods and textures, crying and/or refusing meals, frequently chewing and spitting while eating, and more.
- Because these feeding difficulties in infants, toddlers, and elementary-aged children present differently than eating disorders, these are defined as feeding disorders rather than the typical eating disorder.

Subtypes of Feeding Disorders

Feeding disorders can be further divided into different sub-types, including the following conditions:

- Post-traumatic feeding disorder
- Sensory Food Aversion
- Infantile Anorexia
- Feeding Disorder of State Regulation
- Feeding Disorder Associated with Concurrent Medical Condition
- Feeding Disorder of Reciprocity (Neglect)

Food Intake Disturbance

- Eating disorder:
  - Anorexia Nervosa
  - Bulimia Nervosa
  - Binge Eating Disorder
- Feeding disorder:
  - Organic cause
  - Inorganic cause

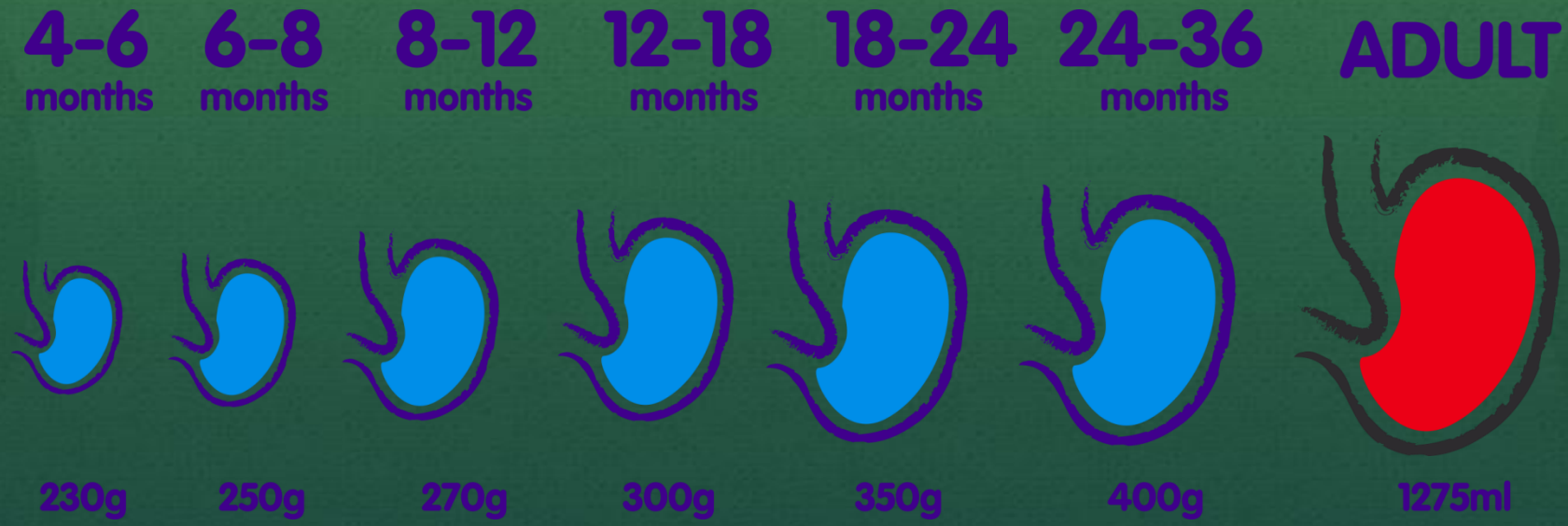
Feeding Conflicts

Chatoor I. *Diagnosis and Treatment of Feeding Disorders in Infants, Toddlers, and Young Children.* Washington, DC: Zero to Three;

Key Nutrition Gaps

Small stomach makes it even more difficult…,

Despite higher nutritional need, they have smaller capacity



Complementary food: Traditional? Baby Led Weaning (BLW)? Mixed method?

Main Medical Reasons for feeding problems

- Reflux
- Undiagnosed Food Allergies
- Constipation
- Dental Problems/caries
- Excessive Juice or milk intake
- Autism
- Infections as UTI
- etc

Feeding Guidelines for All Children

- Avoid distractions during mealtimes (television, cell phones, etc)
- Maintain a pleasant neutral attitude throughout meal
- Feed to encourage appetite
  - limit meal duration (20–30 min)
  - 4–6 meals/snacks a day with only water in between
- Serve age-appropriate foods
- Systematically introduce new foods (up to 8–15 times)
- Encourage self-feeding
- Tolerate age- appropriate mess

FEEDING DISORDERS

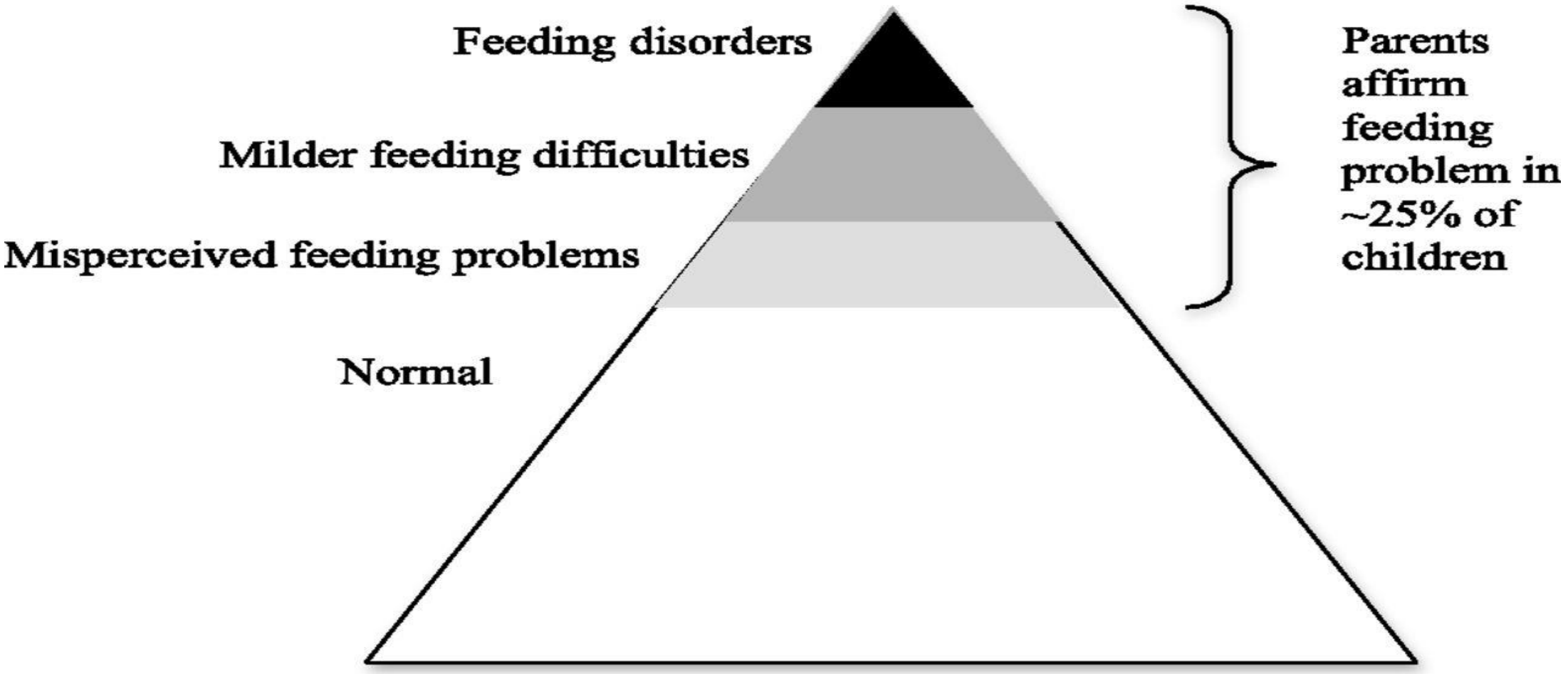
"Persistent failure to eat adequately" for a period of at least one month which results in significant loss of weight or failure to gain weight"

- Manifests prior to six years,

but onset is usually

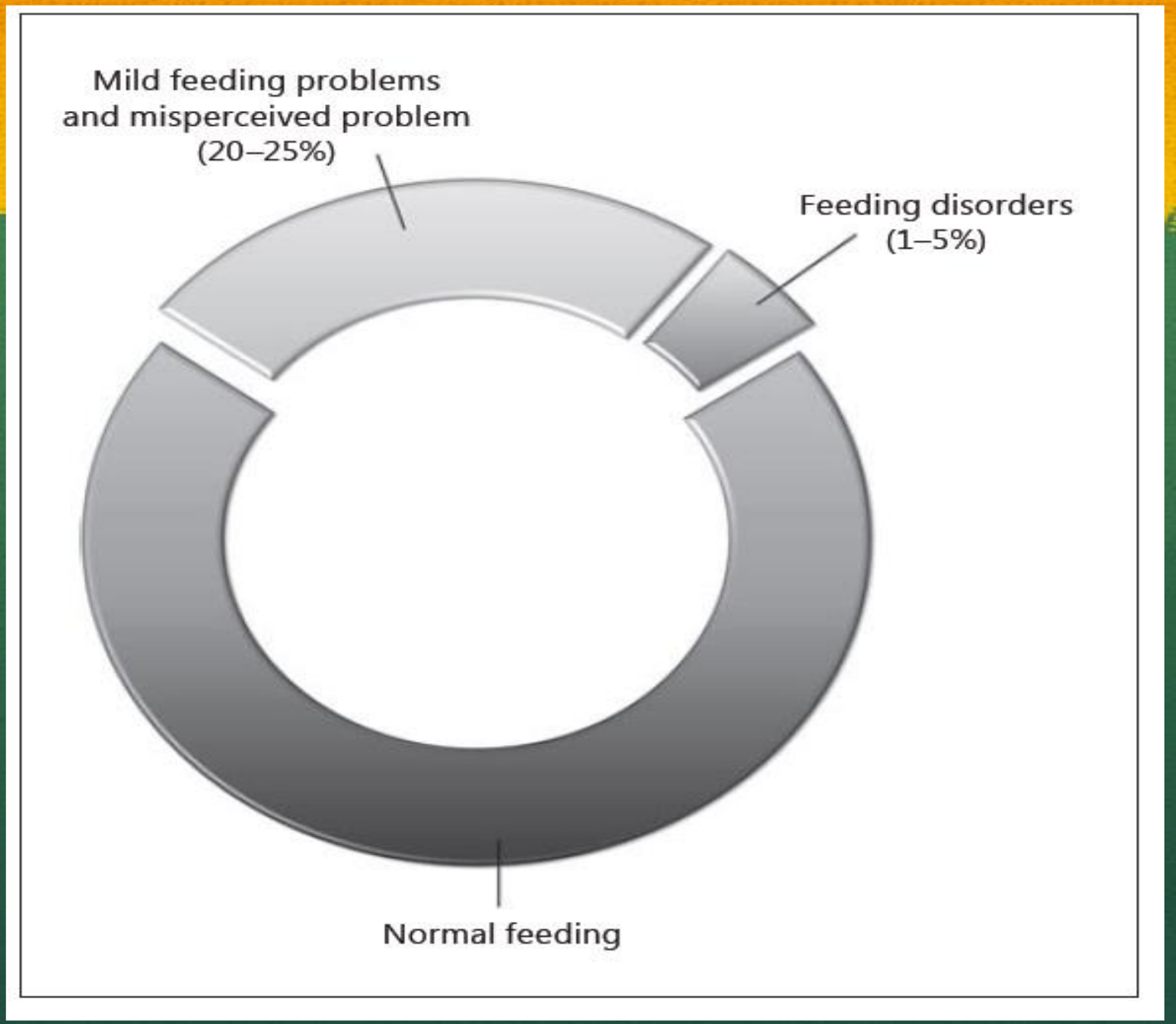
in the first year of life.

Pyramidal representation of young children's feeding behaviours.

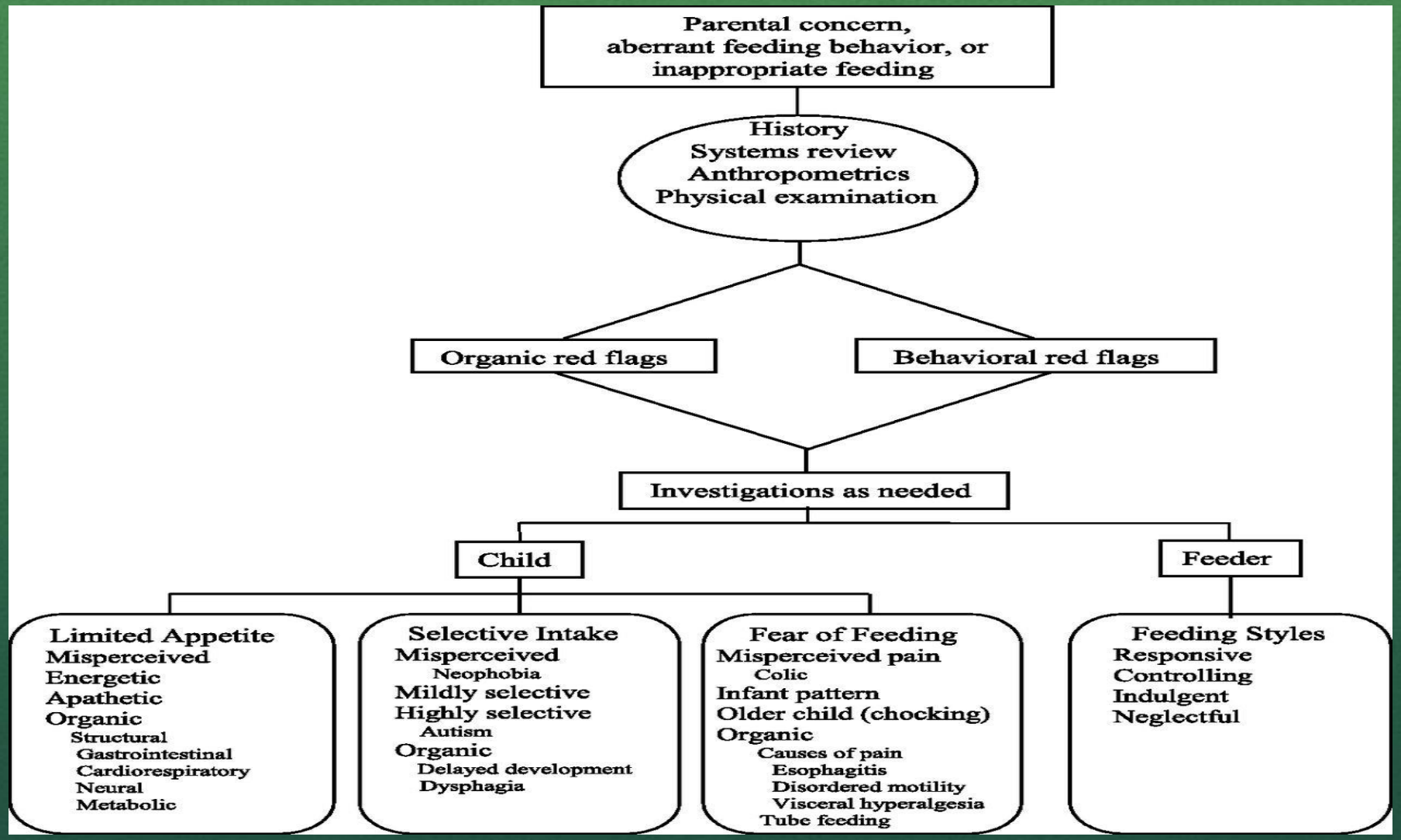


Benny Kerzner et al. Pediatrics 2015;135:344-353

PEDIATRICS®


Mild feeding problems
and misperceived problem
(20–25%)
Feeding disorders
(1–5%)
Normal feeding

An approach to identifying and managing feeding difficulties



Benny Kerzner et al. Pediatrics 2015;135:344-353

Children with feeding disorder usually exhibit one or more of the following:

Feeding and/or swallowing that is **unsafe**

Feeding and/or swallowing that is **inadequate**

Feeding and/or swallowing that is **inappropriate**

Classification of Feeding Difficulties

Systematically categorizes

- behavioral issues
- organic conditions
- caregiver feeding styles

Separates misperceived, mild, and severe conditions

Conditions are

- readily recognized
- identified by familiar and accurate terminology
- logically related to each other
- manageable in number

Specific treatment options are available for each condition

Suggestive Symptoms/Signs

- Prolonged mealtimes
- Food refusal lasting more than1 month
- Disruptive and stressful mealtimes
- Lack of appropriate independent feeding
- Nocturnal eating in toddler
- Distraction to increase intake
- Prolonged breast or bottle-feeding
- Failure to advance textures

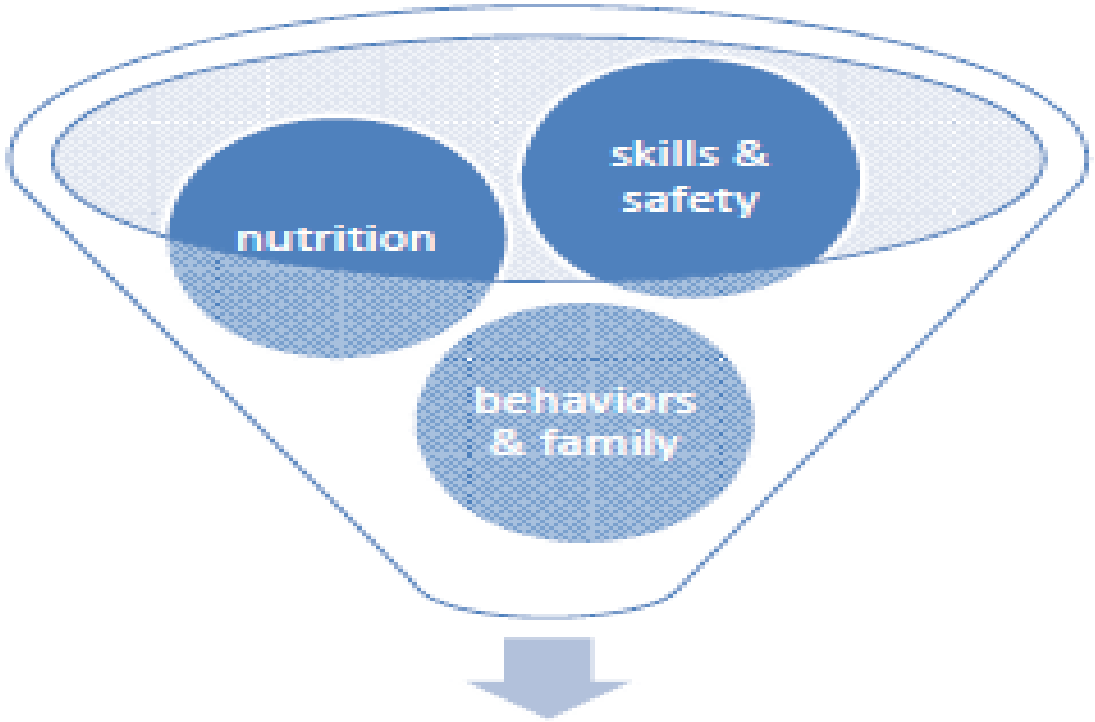
Organic Red Flags

- Dysphagia
- Aspiration
- Apparent pain with feeding
- Vomiting and diarrhea
- Developmental delay
- Chronic cardio-respiratory symptoms
- Growth failure

Behavioral Red Flags

- Food fixation (selective, extreme dietary limitations)
- Noxious (forceful and/or persecutory) feeding
- Anticipatory gagging
- Abrupt cessation of feeding after a trigger event
- Failure to thrive

How To Provide Care



Integrated Assessment &
Treatment

Symptom with Etiologies: Food Refusal (inappropriate-inadequate)

- Chronic
  - Gastro-Esophageal (GE) Reflux
  - Allergies
    - milk and food intolerances
  - Hypersensitivity
  - Pain
  - Behavioral

- Acute
  - Oral lesions
  - Otitis media
  - Pharyngitis
  - Medications

Symptom with Etiologies: Poor Weight Gain

- Inadequate diet, diluted formulas
- Poor appetite
- Slow feeding
- Spilled food
- Hidden infections
- Cystic Fibrosis
- Cardiac insufficiency
- Renal insufficiency
- Malabsorption
- Genetic
- Hormonal deficits
- Psychological/ relationship problems

Management of Selectivity

- Assurance about neophobia
- Foods must often be offered 8 to 15 times without pressure to achieve acceptance

mildly selective child (picky eater):

- “hiding” pureed vegetables in sauces,
- using “dips” to enhance flavor,
- modeling eating,
- giving foods appealing names,
- involving children in food preparation,
- presenting it in attractive designs

Food Neophobia

- Food neophobia in humans has been described as the fear of eating new or unfamiliar foods.
- It differs from avoidant/restrictive food intake disorder.
- Food neophobia is generally regarded as the reluctance to eat, or the avoidance of, new foods.
- In contrast, 'picky/fussy' eaters are usually defined as children who consume an inadequate variety of foods through rejection of a substantial amount of foods that are familiar (as well as unfamiliar) to them.

Influencing factors on neophobia and picky eating

- Through understanding the variables which influence the development or expression of these factors (including age, personality, gender, social influences and willingness to try foods) we can further understand the similarities and differences between the two.
- Because of the inter-relationship between 'picky/fussy' eating and food neophobia, some factors, such as pressure to eat, personality factors, parental practices or feeding styles and social influences, will have similar effects on both magnitude and duration of expression of these behaviors.

When Is Food Neophobia a Problem?

- The child is eating less than 30 foods.
- The child is not eating an entire group of foods, such as no vegetables.
- The child stops eating foods and never starts eating them again.
- Parental stress levels around food are very high.

Tips for picky eaters

- Respect your child's appetite — or lack of one. If your child isn't hungry, don't force a meal or snack. ...
- Stick to the routine. Serve meals and snacks at about the same times every day. ...
- Be patient with new foods. ...
- Don't be a short-order cook. ...
- Make it fun. ...
- Recruit your child's help. ...
- Set a good example. ...
- Be creative.

Children With Fear of Feeding

- **Behavioral**
  - anxiolytic medication,
  - positive reinforcement with rewards,
  - cognitive behavioral therapy,
  - psychiatric referral may be required.
  - liquid oral supplements are often necessary to support the child nutritionally as textures are gradually advanced.

In selected cases, contrast studies or endoscopy are warranted to exclude underlying pathology.

- organic disease:
  - Backgeound disease treatment (GER;EOE;dysphagia;etc)

The Caregiver's Feeding Style

- Responsive feeders
- Controlling feeder
- Indulgent feeders
- Neglectful feeders

TREATMENT BASED ON PSYCHOLOGY OF FEEDING AND SWALLOWING

Focus on accepting certain food types or textures, decreasing resistance and fussiness during eating sessions, and following predictable meal schedule

Uses behavioral principles for treatment:

- Shaping – incrementally moves child towards goal
- Conditioning and reinforcement – training of new behavior through positive reinforcement
- Systematic desensitization – trains child to accept an aversive sensory experience

Overview of Feeding Problems

- Lack sufficient volume or variety for adequate nutrition and/or lack of developmentally appropriate feeding
- 25-40% of toddlers and preschoolers have transient feeding problems
- Chronic feeding problems 5-10% of general population
  - 30% of children with chronic illness
  - 80% of children w/ disabling conditions
- Severe feeding problems that require medical attention and threaten long-term growth and development affect 3-20% of children
- Feeding problems account for 1-5% of hospital admissions
- Limited evidence that feeding disorders may evolve into eating disorders in adulthood

Feeding Disorders classification (Based on etiology)

	Organic feeding disorders	Nonorganic feeding disorders
Medical background	Organic feeding disorders arise in patients with an underlying medical condition	No underlying medical condition
Symptoms	Dysphagia, aspiration, vomiting and diarrhea are some key symptoms that highlight the need for further investigation	Incorrect feeding behavior, including selective food intake, fear of feeding or food refusal
Vulnerable patients	Preterm infants, those with neurological impairment and those with inborn metabolic dysfunctions are vulnerable groups	Psychosocial deprivation, maternal pathologies
Key points for the clinician	It is important to assess the safety of oral feeding; additional nutritional support may be needed	Failure to thrive is a serious consequence

Key features of organic and nonorganic feeding disorders.

Types of Interdisciplinary Interventions

- **Behavioral**
  - Stimulus control procedures
  - Extinction
  - Systematic desensitization
  - Differential attention
- **Nutritional**
  - Nutrition education
  - Manipulation of tube feedings
  - Other appetite manipulation
  - Structured mealtime scheduling
- **Oral-motor**
  - Oral-motor exercises
- **Other psychological**
  - Play therapy
  - Family therapy
  - Psychoeducation
- **Caregiver Training**
  - Teaching specific components of intervention to caregivers

Management based on cause

Multidisciplinary team:

- Collaboration of parents and professionals in working alliance to ensure effectiveness of treatment

Most involved professionals:

- Pediatrician
- Nutritionist
- Feeding specialist

Our Great Responsibility

Thank You for Your Kind Attention

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