

Clinical history in assessing failure to thrive

Feeding history from birth and current mode of feeding and nutrient intake	<p>Breastfeeding</p> <ul style="list-style-type: none"> ● maternal diet ● use of alcohol, diuretics and other drugs that affect milk production and let down <p>Formula feeding</p> <ul style="list-style-type: none"> ● preparation ● volume consumed ● feeding technique <p>Older children</p> <ul style="list-style-type: none"> ● frequency and nutritional adequacy of meals and snacks ● excessive intake of squash and fruit juices ● feeding behaviours: feeding battles, parental attitudes and eating habits, coercive practices
Pregnancy and birth history	<ul style="list-style-type: none"> ● Illness or drugs during pregnancy ● Prematurity, small for gestational age ● Apgar scores and other markers of birth asphyxia
Development	<p>Document age at which major milestones achieved</p> <ul style="list-style-type: none"> ● Recurrent infections ● Vomiting and regurgitation ● Diarrhoea ● Milk intolerance ● Injuries ● Accidents
Past medical history for markers of an underlying medical condition, neglect or abuse	<ul style="list-style-type: none"> ● Assess genetic target growth from stature and growth of parents, siblings and grandparents ● Calculate mid-parental height
Family history	<ul style="list-style-type: none"> ● Marital stress ● Maternal depression ● Young or single parent ● Domestic violence ● Parental employment and economic well-being ● Parental substance abuse
Social history	

Table 2

speech and language therapists to assess oro-motor abilities, health visitors and general practitioners. A home visit might reveal obvious dietary and feeding issues and this input alone often results in improvement.¹⁰

Laboratory investigations

Rather than a comprehensive list of laboratory tests, investigations must be guided by the findings of the clinical assessment. In our practice, we undertake some basic investigations in most children as part of our routine assessment (Table 4). In addition,

Observation of feeding in the context of feeding milestones

Breastfeeding	<ul style="list-style-type: none"> ● Is the infant latching-on and sucking well? ● Is the let-down of milk adequate (assess by asking the mother to express a small amount to check flow)? <p>Newborns cannot approximate lips tightly around the sucking surface (the areola of the breast or the teat of the bottle) so milk leaks out at the corners of the mouth and the infant has 'wind'.</p>
Bottle-feeding	<ul style="list-style-type: none"> ● Does the infant have a strong and adequate coordination of suck and swallow? <p>After the first few days of life, complete approximation of lips to the sucking surface reduces 'wind'.</p>
Spoon feeding and self-feeding	<ul style="list-style-type: none"> ● Is the evidence that the child assists with feeding or self-feeds at an appropriate developmental stage? <p>6–12 months – beginning of chewing together with ability to hold object enabling self-feeding. The fingers go into the food, and much is spilt, accidentally or deliberately</p> <p>15 months – early attempts to feed by spoon</p>
General	<ul style="list-style-type: none"> ● Are there inappropriate practices such as prolonged attempts at winding or discontinuing feeding when the infant is still hungry? ● Does the caregiver recognise the child's cues and child's responsiveness? ● Does the caregiver demonstrate appropriate warmth and behaviour toward the child?

Table 3

it is wise to review the newborn metabolic screen for a young infant who is not growing adequately. In a minority of children, further investigations are based on a specific diagnostic hypothesis arising from the clinical assessment.

In- or out-patient assessment?

Hospitalisation is rarely required and is only indicated for children with acute malnutrition, if outpatient assessment has been inconclusive or where the safety of the child is a concern.¹² The children's ward provides a controlled environment to assess dietary intake, feeding techniques and the carer-child interaction. It allows timely input from important ancillary health-care staff, including dietitians, play therapists and nurses.¹ In cases of frank neglect, appropriate feeding on the ward can demonstrate that the child gains weight. However, the risks of

TABLE 2
Evaluation of Failure to Thrive: History

<i>History</i>	<i>Implication</i>
Dietary history	
Important to be as specific as possible (one-day log of all foods given and eaten)	Quantify total caloric intake.
Amount of food and/or formula	
Attempt to quantify total caloric intake (for infants)	
Is the formula prepared correctly?	Too diluted = too few calories; too concentrated = unpalatable, infant may refuse to drink
Types of food	
Beverage consumption—specifically milk, juice, sodas, and water	Excess fruit juice as cause for FTT
Feeding history	
When does the child eat? Where? With whom?	Distracted infants, inappropriate supervision
How is the child fed—self, spoon, other? Positioning?	Inappropriate feeding techniques for developmental stage
Feeding battles	Food refusal
Snack intake—what, how often is the child grazing?	Poor mealtime eating caused by snacking and early satiety
Past and current medical history	
Birth history—complications, small for gestational age, prematurity	Differentiate FTT from small for gestational age.
Recent acute illnesses—otitis media, gastroenteritis, recurrent viral infections	Growth may improve shortly on own, but needs close follow-up
Chronic medical conditions— <i>anemia, asthma, congenital heart disease</i>	Organic causes of FTT
Past hospitalizations, injuries, accidents	Evaluate for neglect or child abuse
Stool pattern—frequency, consistency, blood, mucus	Rule out malabsorption (cystic fibrosis, celiac disease), infection, and allergy.
Vomiting, reflux, or other gastrointestinal symptoms	Evaluate for milk protein allergy, gastroesophageal reflux, and infection.
Social history	
Who lives in the home?	Identify those caring for the child
Who are the caregivers?	
Who helps support the family?	Assess adequate quantity of food
What is the child's temperament?	High-strung, colicky children may have feeding difficulty.
Any important stressors—economic, intrafamilial, major life events?	May lead to inadequate food supply, depressed parents, neglect
Does anyone at home have a problem with alcohol or drugs?	Neglect
Other children with neglect, FTT, Children's Protective Service reports?	History of neglect
Family history	
Medical conditions or FTT in siblings	Predisposition to organic or genetic causes of FTT
Family members with short stature	Check midparental height formula.*
Differentiate between falling to expected height and true FTT.	
Mental illness	Caretakers with mental illness who may be unable to care for child

FTT = failure to thrive.

*—[(dad's height in cm + mom's height in cm) ± 13 cm] ÷ 2.

NOTE: Add 13 cm for boys, subtract 13 cm for girls. For example, if a girl has a mother who is 5 ft, 5 in (165 cm) tall and a father who is 5 ft, 10 in (178 cm) tall, her expected adult height is [(178 + 165) - 13] ÷ 2, or 165 cm. This height falls between the 50th and 75th percentiles for an 18-year-old girl, and this curve is followed to the actual age to predict the expected height.