

Faltering growth

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Publication date: April 2020

Review date: April 2022

See also: [Faltering growth in breastfed babies](#)

Background

- Faltering growth, previously termed failure to thrive, is a significant interruption in the expected rate of growth compared with other children of similar age and sex during early childhood.
- Long-term, faltering growth is associated with reduced adult height, delayed development and increased incidence of behavioural and psychological disturbance.

Causes to consider:

Inadequate calorie intake	Psychosocial factors	Inadequate absorption	Excessive calorie use	Other medical causes
<ul style="list-style-type: none"> • Inadequate feed (breast milk / formula / solids) 	<ul style="list-style-type: none"> • Parental mental health disorder or substance abuse 	<ul style="list-style-type: none"> • Coeliac disease 	<ul style="list-style-type: none"> • Chronic illness 	<ul style="list-style-type: none"> • Genetic syndromes
<ul style="list-style-type: none"> • Breast feeding difficulties 	<ul style="list-style-type: none"> • Attachment difficulties 	<ul style="list-style-type: none"> • Chronic liver disease 	<ul style="list-style-type: none"> • UTI 	<ul style="list-style-type: none"> • Inborn errors of metabolism
<ul style="list-style-type: none"> • Restricted diet 	<ul style="list-style-type: none"> • Disability or chronic illness in parents 	<ul style="list-style-type: none"> • Pancreatic insufficiency e.g. CF 	<ul style="list-style-type: none"> • Chronic respiratory disease 	
<ul style="list-style-type: none"> • Error in infant formula dilution 	<ul style="list-style-type: none"> • Difficulties at meal times or coercive feeding (e.g. feeding whilst asleep) 	<ul style="list-style-type: none"> • Chronic diarrhoea 	<ul style="list-style-type: none"> • Congenital heart disease 	
<ul style="list-style-type: none"> • Early or delayed weaning 	<ul style="list-style-type: none"> • Behavioural disorders 	<ul style="list-style-type: none"> • Cow's milk protein allergy 	<ul style="list-style-type: none"> • Hyperthyroid 	
<ul style="list-style-type: none"> • Structural causes of poor feeding e.g. cleft palate 	<ul style="list-style-type: none"> • Poor social support 		<ul style="list-style-type: none"> • Preterm birth 	
<ul style="list-style-type: none"> • Persistent vomiting e.g. GORD 	<ul style="list-style-type: none"> • Poor carer understanding 		<ul style="list-style-type: none"> • Excessive exercise 	
<ul style="list-style-type: none"> • Abnormal eating behaviours e.g. eating disorders 	<ul style="list-style-type: none"> • Domestic violence 		<ul style="list-style-type: none"> • Malignancy 	
	<ul style="list-style-type: none"> • Neglect 			

Assessment

Faltering growth in an infant is indicated when:

- Weight crosses 2 centile lines downwards on a growth chart
- Weight is 2 centiles below the length centile
- Weight falls below the 2nd centile
- No catch up from low birth weight (post 2 weeks)
- Crossing down through length centiles as well as weight

Ensure the correct UK WHO Growth Charts are used to plot weight and length. Assess growth history from red book and record any measurements taken.

For infants born before 37 weeks, use Neonatal and Infant Close Monitoring chart to correct for gestational age, until 24 months if born before 32 weeks, until 12 months if born between 32-37 weeks. Do not correct if born at 37 weeks or after.



Blood tests: FBC, U's & E's, CRP, ESR, Coeliac screen, Thyroid Function, Ferritin / Iron

Urine: M,C&S

History taking, observation and examination (also see [table above](#)):

- Frequency and length of breastfeeds (see guideline '[Faltering growth in breastfed babies](#)')
- Inappropriate feeding volumes if bottle fed (expected = 150ml/kg/day for < 6months)
- Incorrect making up of formula (check scoops to water ratio)
- Did faltering growth start at the same time as, for example, introduction of wheat?
- Poor tolerance of feeds (dissatisfied, uninterested / aversion / refusal)
- Inappropriate solid introduction (too early or inappropriate foods)
- Meal times – enjoyable or battles?
- Consider difficult social circumstances and neglect
- Vomiting & reflux / chronic diarrhoea / constipation
- Evidence of CMPA e.g. severe eczema, respiratory symptoms
- Where possible plot mid-parental height
- For children over 2 years calculate and plot BMI
- How much milk in older children (Too many energy dense drinks may reduce appetite for solids)

Red flags:



- Safeguarding concerns or parental mental health issues
- Poor carer understanding
- Poor attachment
- Signs of dehydration or wasting
- Signs of significant illness

Management

Cause requiring medical treatment identified →

- Further investigations as required – consider if needs hospital admission. See [below](#)
- Referral to **Paediatric general medical clinic** (use yellow out-patient referral form) and / or specialist team
- Medications if required / appropriate e.g. iron supplements, laxatives, reflux medication
- See guidelines for specific conditions if identified
- For suspected Cow's Milk Protein Allergy see guideline '[Cows' Milk Protein Allergy \(CMPA\)](#)'
- For suspected eating disorder see guideline [eating disorders guidelines](#)

No medically treatable cause identified →

- If breastfed baby, see guideline '[Faltering growth in breastfed babies](#)'
- If inappropriate feeding volumes, give advice on appropriate feeding volumes and feed frequency → 150ml/kg/day for infants under 6 months, 3 hourly feeds x 8 if young infant, may be able to take 4 hourly feeds x 6 if older infant
- If incorrect making up of formula, direct to NHS Choices '[How to make up baby formula](#)'
- If inappropriate solid introduction, direct to NHS Choices '[Your baby's first solid foods](#)'
- Consider adding extra calories into the diet
 - If breastfed, top up after feeds (see breastfeeding guidelines)
 - If bottle fed – add an extra feed
 - If weaned, see [notes below](#)
- Consider admission if severe faltering growth and needs longer period of observation (+/- NGT feeding). See 'when to consider admission to hospital' [below](#).
- Consider referral to **Consultant Paediatrician** for follow-up

When to consider admission to hospital:

- Signs of significant illness or dehydration
- Signs of abuse, neglect, poor parental understanding or psychosocial concerns
- Children who have persistent faltering growth despite adequate intervention
- To establish NG feeds if serious concerns and other measures unsuccessful.
 - ! Ensure clear goals and strategies for withdrawal when they are reached are identified.

All infants should be referred to a Paediatric Dietitian (regardless of aetiology).

Contact details for Paediatric Dietitian:

- Bleep 8695
- Ext 2389 / 3156 / 2390

If in CED, and dietitian unable to see patient in CED, please leave a message on the answerphone and make an urgent written referral.

Other management points:

- In all cases, contact the **Health Visitor** to provide support and monitoring at home.
- Consider asking families to keep a record of intake
- At discharge from CED or after clinic consultation, make a clear plan with parents including proposed investigations and interventions, how often to monitor (see below) and follow-up plan. This can be Symphony discharge letter or clinic letter.
- One clinician should take responsibility for follow up and ensure that appointments are attended.
- If new clinical symptoms or signs develop after the initial assessment, reconsider whether investigations are needed.

Monitoring

Arrange for reassessment of weight at an appropriate interval – too often may lead to unnecessary anxiety.

Weight no more often than:

- | | |
|-----------------------------------|---------------------------------|
| • Daily if less than 1 month old | • Weekly between 1–6 months old |
| • Fortnightly between 6–12 months | • Monthly from 1 year of age. |

Height / length no more frequently than 3 months.

Notes

All infants will need assessment by a dietitian for suitability of use of a high energy formula as these formulae are not suitable for all infants, for example, they would not be appropriate for infants that are small for gestational age (SGA) or those with suspected cow's milk protein allergy.

High Energy formulae available on prescription from GP:

- Infatrini (Nutricia) 1kcal/ml
- Similac High Energy (Abbott) 1kcal/ml
- SMA High Energy (SMA) 1kcal/ml

Quick guide on adding calories to the diet of an infant who is weaned

- Add 'full fat' milk, cream, butter, crème fraiche, cream cheese, mayonnaise, grated cheese to foods such as potatoes, vegetables, sauces, scrambled eggs, omelettes etc.
- Use extra oil in cooking (frying / roasting)
- Choose oily fish such as salmon and mackerel
- Add avocado to meals
- Use full fat tinned coconut milk / cream to make sauces
- Use smooth peanut butter or other smooth nut / seed butters as a spread for toast.
- Offer milky dessert after meals e.g. rice pudding, custard, yoghurt (full fat, fromage, or greek), fruit with cream or yoghurt.
- Offer high energy finger foods e.g. cubes of cheese, cheese straws, toast with fish or meat pate / full fat cream cheese / nut butter / full fat hummus

Tips for mealtimes

- ✓ Encourage relaxed and enjoyable feeding and mealtimes
- ✓ Eat together as a family or with other children
- ✓ Encourage young children to feed themselves
- ✓ Allow young children to be 'messy' with their food
- ✓ Make sure feeds and mealtimes are not too brief or too long
- ✓ Set reasonable boundaries for mealtime behaviour while avoiding punitive approaches
- ✓ Avoid coercive feeding
- ✓ Establishing regular eating schedules (for example 3 meals and 2 snacks in a day).