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# The management of major gastrointestinal findings in CDG

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## Major gastrointestinal findings in CDG

- Feeding problems
- Gastroesophageal reflux
- Failure to thrive
- Protein losing enteropathy
- Liver disease, fibrosis / cirrhosis



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# Feeding problems I

## The generals

Baby falls asleep soon after starting feeds

? Insufficient sucking → check positioning, exchange tits  
review by clinician

Baby has lots of gas / stomach discomfort

? Lactose intolerance → switch to soy formula

Baby cries for hours after meal

? Colics → Rocking chair, use cradle, baby massage



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## Feeding problems II

Baby vomits large amounts of feeds after meal

? Pyloric stenosis → x-ray

Baby seems to have slow weight gain

? Problems to absorb, digest feeds → blood, urine, stool tests

Baby seems to have little interest in food

? Developmental problem → examination by clinician





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# Feeding problems Management

- Adjustment of feeding routine
- Increasing calorie intake
- Exchange of milk feeds / food
- Exclusion diet



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## Gastroesophageal reflux

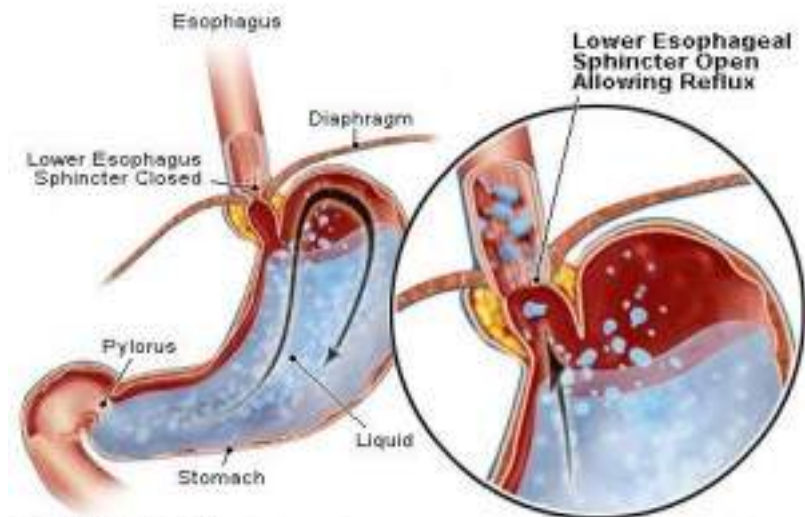


Common problem !

unhappy unsettled baby  
spitting up after feeds

and / or

only churning, gurgling,  
crying, wimping



Gastroesophageal Reflux



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# Gastroesophageal reflux – Management I

Smaller, more frequent feedings

Holding baby in upright position for 20min after feedings

Small holes in tits

Thickening feed

Breastfeeding mums to avoid foods  
aggravating reflux:

role of thumb no-go for acidic, fatty or  
gassy





# Gastroesophageal reflux – Management III

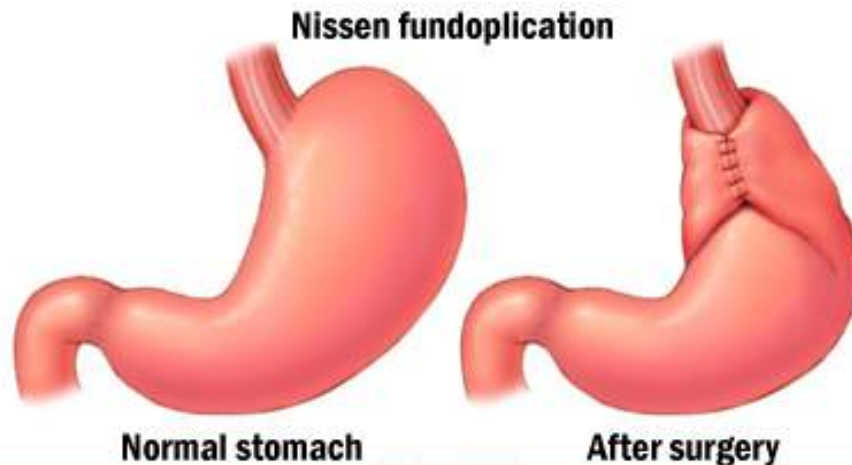
Gaviscon:

mixes with gastric content, stabilizes and thickens them

Ranitidine:

reducing stomach acid, helping existing inflammation in the  
esophagus 1

Surgical:







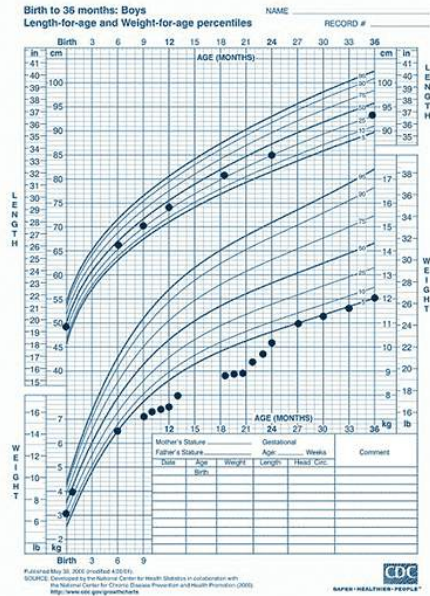
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# Failure to thrive

= inappropriate weight gain

- Inadequate nutrient intake
- Inadequate nutrition absorption or increased losses
- Increased requirements or ineffective utilization





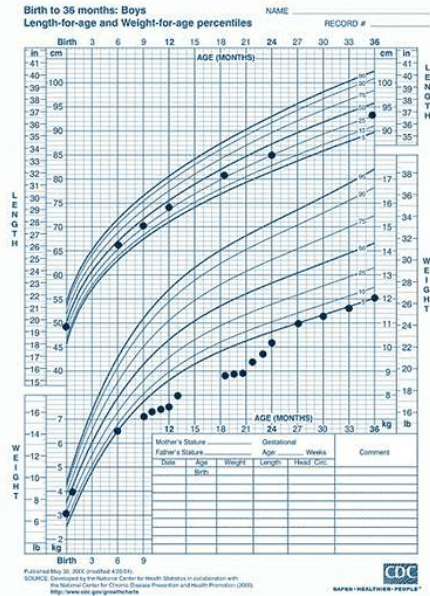
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## Failure to thrive

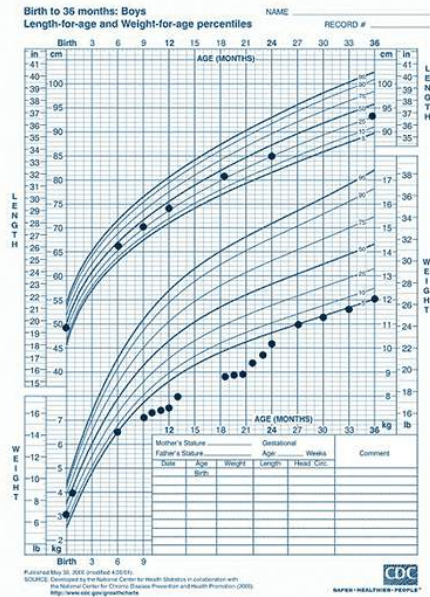
= inappropriate weight gain

- Inadequate nutrient intake

feeding difficulties

inadequate appetite

inability to take in appropriate amounts





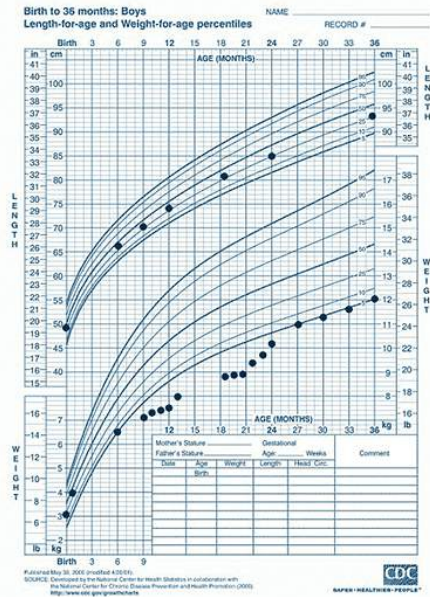
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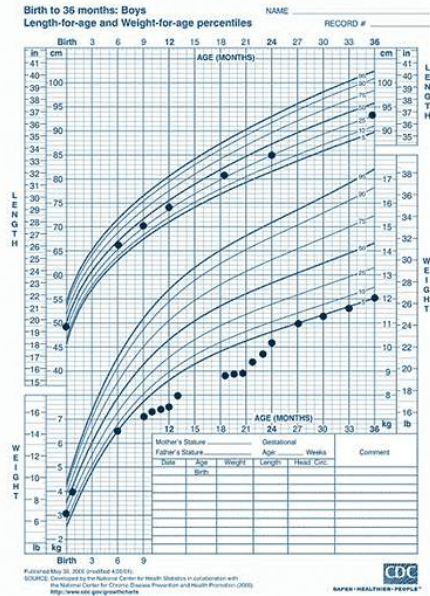
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## Failure to thrive

= inappropriate weight gain

- Inadequate nutrition absorption or increased losses

malabsorption  
gut disease  
abnormal gut





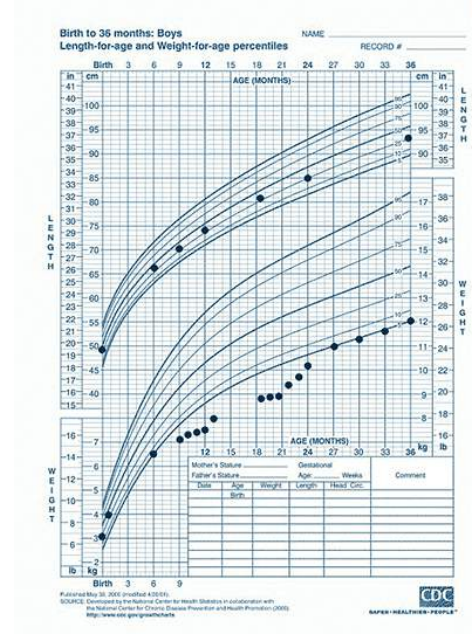
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# Failure to thrive Management

Depending on the reason for inappropriate weight gain

increasing daily calorie intake

increasing caloric density of feeds

spreading out feeds

continuous vs bolus feeds







## Gastrointestinal findings in CDG

- Protein losing enteropathy  
= protein loss in gut

particularly in CDG-PMI (-Ib)–  
but also seen in CDG-PMM (-Ia), CDG-Alg6 (Ic),  
CDG-Alg8 (Ih) ...



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## Gastrointestinal findings in CDG

- Increased liver enzymes:  
often only intermitted
- Liver fibrosis / cirrhosis:  
scarring process, initially reversible



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## Major gastrointestinal findings in specific CDG subtypes

CDG type	PMM-CDG (Ia)	PMI –CDG (Ib)	Alg8 - CDG (Ih)
Feeding difficulties	++ - +++	+	+
Failure to thrive	+ - ++++	+ - ++	
Protein loosing enteropathy	+	++ - +++	++ - +++
Liver abnormalities	+ - +++	+ - ++	+ - ++



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## The team player

*We are all together*

Nurses

Parents  
Family

Pediatrician

Surgeon

Specialist

Radiologist

Feeding clinics

Biochemist

