

Strategies to optimise feed tolerance*

**in considering reasons for feed intolerance also consider medical causes and possible side effects of medications*

Nausea and vomiting	
Possible cause	Solution
Feed contamination	<ul style="list-style-type: none"> • Use sterile commercially produced feeds • Follow DHB and/or manufacturer's preparation and storage guidelines. • Hang time for powdered formula or feed is 4 hours at room temperature and store for up to 24 hours in the back of the refrigerator. • Ensure giving sets and feeding bottles are changed every 24 hours. • Check cleaning of reusable syringes. • Ensure pump, backpack, poles and other feeding equipment is cleaned regularly.
Incorrect feed dilution	<ul style="list-style-type: none"> • Check recipe being used to prepare formula is correct.
Feed infusion rate too rapid	<ul style="list-style-type: none"> • Trial smaller feeds at reduced infusion rate and increase as tolerated to provide required nutritional intake • OR trial continuous feeding at low rate, increasing rate slowly as tolerated. • Ensure fluid requirements are met.
Delayed gastric emptying	<ul style="list-style-type: none"> • Ensure correct patient positioning and discuss potential benefit of pro-kinetic medications with Paediatrician. • Increase feed breaks in between bolus feeds, and then slowly decrease once tolerance has improved.
Constipation	<ul style="list-style-type: none"> • Maintain regular bowel motions by ensuring adequate fluid intakes, trialling fibre containing feeds. • For powdered feeds check that formula is being prepared as recommended. • If necessary, discuss potential use of laxatives with the Paediatrician/GP. • Investigate potential food allergy/intolerance with Paediatrician/GP.
Timing of medications in relation of feeds	<ul style="list-style-type: none"> • Review doses of medications. • Ensure correct guidelines followed regarding medicine administration e.g. timing of medications in relation to feeds/water flushes given with medications • If necessary, stop continuous feed for a short time when medicines are given.

Reflux and aspiration	
Possible cause	Solution
Gastro oesophageal reflux	<ul style="list-style-type: none"> • Ensure correct positioning during and post feeds. • Reduce infusion rate of feed • Reduce total volume of feed, while maintaining adequate hydration, by increasing strength of formula, as tolerated and as prescribed and monitored by Dietitian. • Consider change in formula to reduce gastric emptying time or increase tolerance of feeds. • Discuss possible use of anti-reflux medications with Paediatrician.

Reflux and aspiration	
	<ul style="list-style-type: none"> Investigate potential food allergy/intolerance with Paediatrician/GP.
Dislodged tubes (nasogastric or naso jejunal tubes)	<ul style="list-style-type: none"> Ensure tube placed correctly and secure tube adequately. Test position of nasogastric tube prior to each feed using pH indicator paper. Patient to return to hospital to reinsert naso-jejunal tubes and confirm correct placement by radiology.
Feed infusion rate too rapid	<ul style="list-style-type: none"> Trial smaller feeds at reduced infusion rate or continuous feeding at a low rate, increasing rate slowly as tolerated
Intolerance of bolus feeds	<ul style="list-style-type: none"> Trial smaller volume feeds at reduced infusion rate, more frequently over the day or continuous infusion with slow increase in infusion rate as tolerated.
Incorrect feed dilution	<ul style="list-style-type: none"> Check recipe being used to prepare formula is correct.

Diarrhoea	
Possible cause	Solution
Unsuitable choice of feed in children with impaired gut function	<ul style="list-style-type: none"> Change to a partially hydrolysed formula, extensively hydrolysed formula or amino acid based formula
Feed infusion rate too rapid	<ul style="list-style-type: none"> Reduce infusion rate and increase as tolerated to provide required nutritional intake. Ensure fluid requirements are met.
Intolerance of bolus feeds	<ul style="list-style-type: none"> Smaller, more frequent feeds or change feeding regimen to continuous infusion
High feed osmolality	<ul style="list-style-type: none"> For powdered feeds check that formula is being prepared as recommended. Consider reducing strength of feed to standard concentration or changing to an iso-osmolar feed. Increase strength/energy density as tolerated. Deliver by continuous infusion
Feed temperature (too cold)	<ul style="list-style-type: none"> Formula may be removed from fridge 15-20 minutes before feed is due to be given to allow it to come to room temperature.
Incorrect feed dilution	<ul style="list-style-type: none"> Check recipe being used to prepare formula is correct.

For persistent feed intolerance, discuss potential benefits of jejunal feeding and or fundoplication with Paediatrician.