AA 8. Are there any indications (e.g. high triglycerides, sepsis) to wean, reduce or restrict parenteral lipid administration?

Source recommendation				Back to question list
Source guideline title and developer	**NICE 2020** https://www.nice.org.uk/guidance/ng154/chapter/Recommendations#indications-for-and-timing-of-neonatal-parenteral-nutrition			
Existing guidelines recommendation	**Serum triglycerides** Measure serum triglycerides: daily while increasing the parenteral nutrition lipid dosage weekly after reaching a maintenance intravenous lipid dosage. Measure serum triglycerides more frequently, but not more than once a day, if: the level is elevated the preterm or term baby is at risk of hypertriglyceridaemia, for example, if the baby is critically ill or has a lipaemic blood sample. Be aware that ongoing serum triglyceride monitoring may not be needed for stable preterm or term babies transitioning from parenteral nutrition to enteral nutrition.			
Year published	2020			
Search updated/assessment of new evidence	August 2025. No new evidence was identified.			
Strength and direction of recommendation	The NICE committee acknowledged that some neonatal units monitor triglycerides more or less frequently, and some neonatal units do not monitor triglycerides at all. No research evidence was found but based on expert opinion, the NICE committee agreed that when an infant is at risk of hypertriglyceridaemia for example is critically ill or has a lipaemic blood sample, triglycerides should be monitored more frequently to ensure the safety of the baby (but no more than once a day).			
GRADE certainty of evidence	Very low			
Were EtD and SoF available?	Yes https://www.nice.org.uk/guidance/ng154/evidence/f-monitoring-neonatal-parenteral-nutrition-pdf-254996313882			
Is the recommendation recent and credible	Yes AGREE II score: 88%			
Assessment of suitability for adolopment				
Is the recommendation relevant to local setting (population/ intervention/comparator)?	Yes			
Are the judgements in the source EtD acceptable without modification?	No			
Are any local contextual factors different (e.g. cost, equity, feasibility)?	Yes			
EtD Criterion	**Summary of local evidence or context**		**Judgement**	**Notes**
Problem	Hypertriglyceridaemia and lipid intolerance are occasionally observed in very preterm infants receiving parenteral lipid emulsions.		Priority	There is variability in monitoring triglycerides in clinical practice.

Desirable effects	Reduces risk of fat overload, liver dysfunction and metabolic complications.	Moderate	May be important for patient safety and long-term outcomes.
Undesirable effects	Reducing lipids limits energy provision and essential fatty acid intake. Additional blood testing is distressing to infants and parents and increases the risk of anaemia.	Moderate	May impact growth if prolonged.
Certainty of evidence	No studies were identified	Very low	No high-quality trials.
Values and preferences	Clinicians value safety but balance it with nutrient needs; families may be unaware of technical decisions.	Possibly major variability	Likely to align with clinical judgement in most units.
Balance of effects	Little evidence of benefit in preterm infants and limits early energy intake. Extra blood test needed.	Favours comparator	Enables continuation of adequate parenteral nutrition.
Resources required	Requires triglyceride monitoring; may involve switching emulsions or dose reduction.	Small	Triglyceride measurement not universally rapid in all settings.
Certainty of resource evidence	Cost and availability of lipid emulsions and lab monitoring are well known locally.	High	No significant uncertainty.
Cost-effectiveness	No studies	Unknown	
Equity	Consistent protocols can increase equity.	Probably increased	Standardised approach supports fair care access.
Acceptability	May be acceptable among clinicians if there was evidence of benefit. Extra blood tests less acceptable. More frequent blood monitoring may result in reduced parenteral satisfaction and increased infant distress and pain associated with blood taking.	Probably yes	Already practiced informally in many settings.
Feasibility	Feasible where biochemical monitoring and clinical support are available.	Yes	May require improved lab access in smaller units.

Judgement criteria for EtD	
Decision Type	☐ Adopted as is ☑ Adapted ☐ De novo recommendation required
Explanation of adaptation	The Guideline Development Group acknowledges that some Aotearoa New Zealand neonatal units monitor triglycerides more or less frequently, and some neonatal units do not routinely monitor triglycerides at all. No research evidence was found to support a recommendation to begin monitoring triglycerides in neonatal units that do not already do this.
Final Recommendation	
Recommendation statement (adapted)	When an infant is at risk of hypertriglyceridaemia, for example has a lipaemic blood sample, triglycerides should be monitored. The reduction of lipid emulsion during episodes of sepsis is not recommended.
Strength	Conditional
Certainty of evidence	Very low
Basis for decision	No research evidence was found to support the routine measurement of triglycerides or the reduction of lipid emulsion during

	episodes of sepsis.
Subgroup considerations	Caution is needed in extremely preterm infants and those with pre-existing metabolic instability.
Implementation considerations	No implementation required
Monitoring and evaluation	If triglycerides are monitored, this should be no more than once a day.
Research priorities	Whether routine monitoring of serum triglycerides and reduction of the lipid emulsion dose is beneficial and if so at what serum triglycerides concentration should the lipid emulsion dose be reduced.