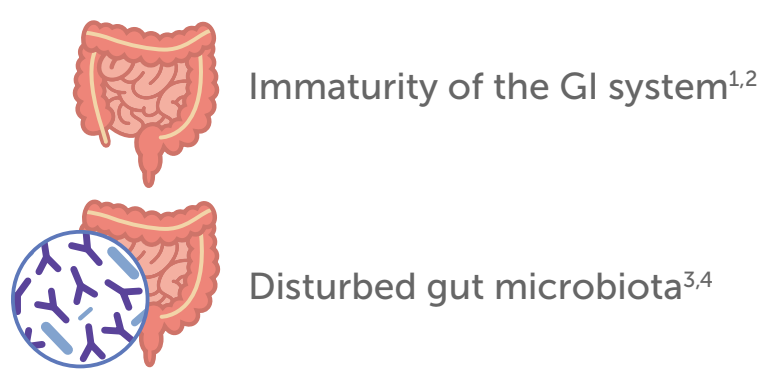


How Can Preterm Infants Benefit From Human Milk Oligosaccharides

Up to **50%** of preterm babies suffer from feeding intolerance¹

Feeding intolerance is linked to:

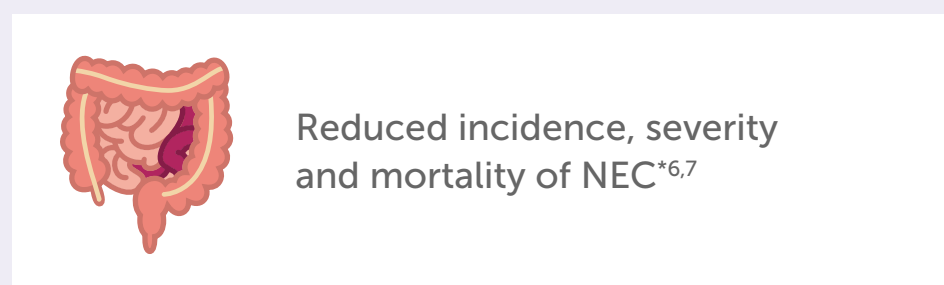


Goal in neonatal care:

Achieving timely enteral feeding is critical to support healthy growth and development, including the GI tract^{2,5}



First evidence suggests HMOs may reduce morbidity and mortality in preterm infants



Preterm infants may have insufficient HMO intake

Mother's own milk



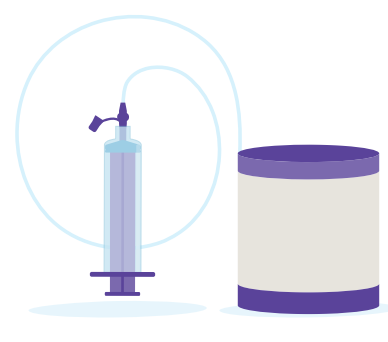
HMO levels may be reduced⁹

Donor human milk



Pasteurisation and sterilisation reduce HMO levels in human milk^{10,11}

Alternative feedings

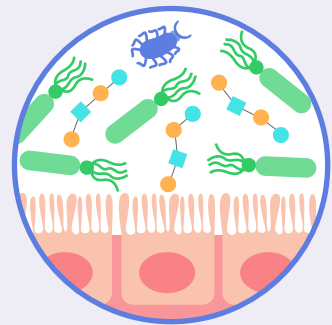


Do not currently contain HMOs

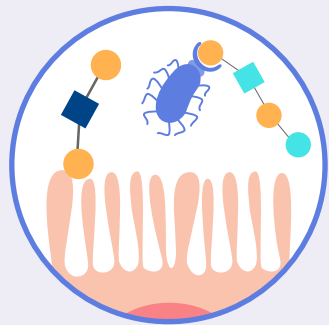
HMOs Help the Immune Defenses in 4 Main Ways¹²



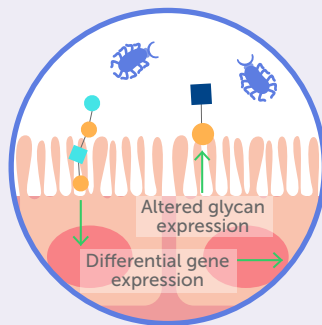
Promotes the growth of beneficial bacteria



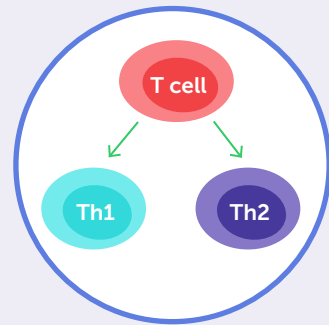
Prevents pathogen adhesion in the gut



Strengthens gut barrier function

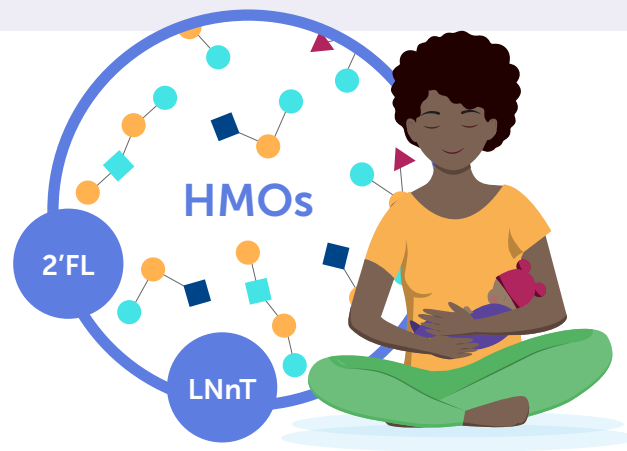


Educates the developing immune system

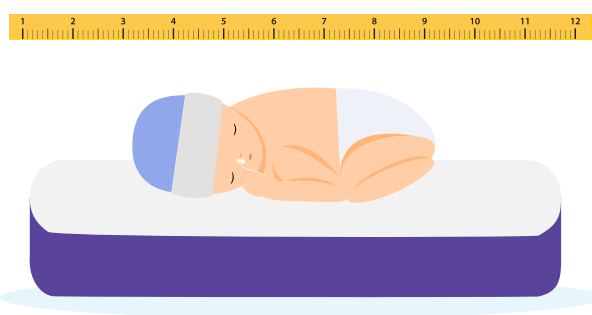


Evidence suggests that HMOs, 2'FL and LNnT, support timely full enteral feeding and early postnatal growth^{13***}

Supplementing 2'FL and LNnT supports adequate growth outcomes, in line with Fenton growth standards for preterm infants¹³



Improved* body length vs control



Similar body weight vs control



Improved** head circumference vs control



*Day 14, Day 21: p<0.05. **at Discharge: p<0.01

Using 2'FL and LNnT, the mean time to reach full enteral feeding was **2 days shorter**^{13‡}

Placebo



HMO (2'FL, LNnT) supplement



‡Time to reach full enteral feeding is a reliable indicator of feeding tolerance

Preterm infants are a vulnerable group of neonates which may have insufficient HMO intake. Supplementing the HMO 2'FL and LNnT supports early full enteral feeding and adequate growth in preterm infants.

*Pre-clinical study; **observational study in preterm infants; ***randomised, controlled, clinical study. FEF, full enteral feeding; FL, fucosyllactose; GI, gastrointestinal; HMO, human milk oligosaccharide; LNnT, Lacto-N-neotetraose; NEC, necrotising enterocolitis.

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 1. Indrio F, et al. *J Matern Fetal Neonatal Med.* 2011;24 Suppl 1:64-6. 2. Fanaro S. *Early Hum Dev.* 2013;89 Suppl 2:S13-20. 3. Di Mauro A, et al. *Ital J Pediatr.* 2013; 24:3915. 4. Ford SL, et al. *Am J Clin Nutr.* 2019; 109(4):1088-1097. 5. Senterre T. *World Rev Nutr Diet* 2014; 110:201-14. 6. Jantscher-Krenn E et al. *Gut* 2012; 61(10), 1417-1425. 7. Autran CA, et al. *Br J Nutr.* 2016; 116(2):294-9. 8. Underwood MA et al. *Pediatr Res.* 2015 Dec;78(6):670-7. 9. Austin S et al. *Nutrients.* 2019;11(6):1282. 10. Marx C et al. *J Hum Lact.* 2014;30(1):54-61. 11. Meredith-Dennis L et al. *J Hum Lact.* 2018;34(1):120-129. 12. Bode L. Human milk oligosaccharides: Every baby needs a sugar mama. *Glycobiology.* 2012;22(9): 1147-62. 13. Hascoet JM et al. Abstract for WCPGHAN 2021.