

# Probiotics in NICU

We understand that having a premature or sick baby can be stressful, especially as they can develop a variety of problems associated with prematurity. Here we explain why we are introducing probiotics to improve feeding outcomes in premature babies.

## What is different about feeding premature babies?

We know that premature babies tolerate milk best if it is your breast milk and if it is introduced gradually. Until they are able to tolerate enough milk, we feed most premature babies with a special intravenous liquid feed called Total Parenteral Nutrition (TPN). Parenteral nutrition means giving nutrition to babies directly into their bloodstream through a vein (intravenously). It provides babies with vital energy and nutrients to help them grow, containing protein, energy, fat, vitamins and minerals.

Some premature babies find digesting milk difficult and take longer than others to manage this although this is not as common in breast fed babies. Most babies remain very well, but around 5% of premature babies become unwell with a condition called 'NEC' (**N**ecrotising **E**ntero**C**olitis) in which there is inflammation of the gut. Many babies who get NEC recover fully, but it can sometimes be serious, sometimes needs an operation, and can be life-threatening.

## What can we do to try and prevent NEC?

Your choice in how you will feed your baby is one important factor. Breast milk is the best milk for your baby. It reduces the risks of bowel problems including NEC. Even small amounts of your breast milk are important for your baby. Early expression of breast milk starting as soon as possible after birth and ongoing frequent expression of breast milk are important for optimal early nutrition for your baby and for successful provision of breast milk. We will support and encourage you in expressing breast milk.

## Probiotics

There is evidence that giving preterm babies (including those fed on breast milk) small amounts of 'healthy' bacteria (like those found in live yoghurts and probiotic drinks) reduces the risk of NEC. Many neonatal units now give probiotics routinely to preterm babies, though it is not yet standard practice in all units in the UK.

## What do we know about probiotics and preterm babies?

Probiotics to prevent NEC have now been studied in well over 10000 preterm babies. The accumulated evidence clearly shows that probiotic bacteria (specifically species of *bifidobacterium* and *lactobacillus*) are effective in reducing the incidence of NEC by more than 50%, and so reduce mortality. *This means*

*that probiotics appear to protect babies against NEC and improve their survival chances. Babies who did not get probiotics were twice as likely to develop serious NEC as those who did.*

## Are there any risks of getting probiotics?

There is a very small risk that a baby may actually get an infection from the probiotic bacteria. While very occasional cases have been reported, there were no cases among any of the 10000+ babies studied in the clinical trials. In the unlikely event that an infection happens we have antibiotics available that kill probiotic bacteria. Rare cases of bloodstream infection reported so far were relatively minor and easy to treat.

## Are there any risks from not getting probiotics?

If your baby does not get probiotics, current evidence suggests that, on average, they may be at an increased risk of developing NEC compared to a baby of similar size/gestational age that is given probiotics. However, most premature babies do not get NEC even without probiotics, and giving probiotics will not prevent all cases of NEC.

## What is being offered?

We believe your baby may benefit from probiotics. Our routine practice is to start giving probiotics as soon as a baby is ready to receive their first colostrum/milk feeds and to continue them until ready for discharge. If your baby is transferred back to another hospital while still receiving probiotics at St. Mary's, it is possible that ongoing probiotic treatment will not be available after transfer as not all units are currently using them.

Probiotics are classed as food supplements in the UK. We have completed a risk assessment and deem that the product we have chosen to use (Labinic) is suitably manufactured in specialist facilities.

## Please let the doctor or nurse looking after your baby know if you do not want your baby to be given probiotics

If you are unsure, or wish to discuss this with a senior doctor, please let the nurse caring for your baby know.

## What if I want more information or have any questions?

Please tell the nurse or doctor looking after your baby that you would like more information.

Thank you for reading this leaflet,

St. Mary's Hospital Newborn Services healthcare professionals

### Acknowledgement

The NICU staff wish to acknowledge Dr Paul Clarke and the team in Norfolk and Norwich University Hospitals, who kindly shared their probiotics parent information leaflet, and on which this one has been based. The leaflet has been reviewed and updated by parents of NICU babies.

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