Information for parents about the prevention of necrotizing enterocolitis, sepsis and death in very premature infants.

Necrotizing enterocolitis (NEC) is a common and devastating condition that mostly occurs in premature infants, usually between 2 and 8 weeks of age. Babies with NEC suddenly develop abdominal distention, bloody stools and can rapidly develop perforation of the intestine requiring surgery to remove damaged portions of the intestine. NEC is the most common cause of death for extremely premature infants between 2 and 8 weeks of age.

Sepsis means a bacterial infection in the bloodstream. It is more common in premature infants than term infants. These bacteria either enter the bloodstream from the skin or the intestinal tract.

Two things have been shown to decrease the risk of NEC, sepsis and death in premature infants: human milk and probiotics. Human milk from the baby’s mother has more nutrients and is more protective than pasteurized donor human milk. Probiotics are dietary supplements containing live healthy bacteria. Neither human milk nor probiotics can prevent every case of NEC, sepsis or death.

Some studies in premature babies have shown improved feeding tolerance with probiotics (less spitting up and less distention of the abdomen leading to faster advancement of feeding, fewer days of IV nutrition, and shorter time to discharge home). Some studies have shown improved weight gain with probiotics.

After careful review of the medical literature including studies involving thousands of premature infants, our recommendations for your premature baby are the following:

1. Begin hand expression and/or pumping of your breast milk and work closely with our lactation consultants so that we can feed your baby your milk as soon as possible.
2. If you are unable to provide a sufficient quantity of milk for your baby we recommend providing pasteurized donor human milk rather than formula until your baby reaches 34 weeks gestation.
3. The risks of providing your own milk are very low and are limited to infection with viruses such as HIV, CMV, Hepatitis B and Hepatitis C. Unless you are HIV positive or taking illicit substances or a very few medications such as chemotherapy, the benefits of using your own milk far outweigh the risks.
4. The risks of providing pasteurized donor milk are related to the lower content of protein and antibodies, so donor milk is often fortified to improve growth. The benefits of donor milk outweigh the benefits of premature infant formula, so donor human milk is recommended by the American Academy of Pediatrics for premature infants if their mothers are unable to provide an adequate supply.
5. We recommend providing a probiotic product as soon as your baby starts receiving milk and continuing this product until the baby reaches 34 weeks gestation.
6. The risks of administering a probiotic appear to be small and include contamination of the probiotic with unhealthy bacteria and infection in the bloodstream from the probiotic itself. These episodes seem to be very rare. Routine administration of probiotics to
premature babies is not yet recommended by the American Academy of Pediatrics or the US Food and Drug Administration (FDA). In our opinion, the benefits of probiotic administration far outweigh the small risks.

7. The FDA views probiotics as drugs if they are used to prevent a disease and as foods if they are used to provide nutrition. Since the FDA has not approved probiotics to be used as a drug, our main purpose in providing the probiotic is to provide nutrition.

If you have any questions about human milk or probiotics please ask your nurse, nurse practitioner or neonatologist.