Information for Parents of Very Premature Infants:
Helping to prevent necrotizing enterocolitis, sepsis, and death

Necrotizing enterocolitis (NEC) is a common and potentially fatal condition that mostly occurs in premature infants, usually between two and eight weeks after birth. Babies with NEC suddenly develop abdominal swelling, bloody stools, and can rapidly develop areas of dead tissue in their intestines that may allow harmful intestinal content to escape into the rest of the body. Surgery may be required to remove these damaged portions of the intestine.

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. In NEC, this is especially likely after intestinal damage.

Two things have been shown to decrease the risk of NEC, sepsis and death in premature infants:

- Human milk
- Probiotics

Human milk from the baby’s mother is the best food for a baby. When more volume of milk is needed than the mother can provide, donor human milk may be provided. Donor milk is pasteurized to prevent disease transmission, but this process can reduce the nutrient content and some of the milk’s protective benefits.

However, both mother’s milk and donor human milk are considered better than formula, because they contain numerous factors not present in formula that help the intestine to properly mature and support growth of helpful bacteria while fighting off harmful bacteria.

Probiotics are dietary supplements containing live helpful bacteria that support proper function and development of the intestine. They may be the same strains that are selected for by human milk.

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, and Hepatitis. 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 will begin providing a probiotic product as soon as your baby starts receiving your milk/donor milk and continue this probiotic 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 blood stream from the probiotic itself. These episodes are rare and in our opinion the benefits of probiotic administration outweigh the possible risks.

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