The Benefits of Exclusive Breastfeeding and the Use of Donor Breast Milk in the NICU Newborn

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Choices
Human Milk: Why is it so Important for the Premature Infant

- Recommended nutrition for all infants
- Protective effects against infection
- Bifidus Factor
- Lactoferrin
- Natural antibacterial agents present in human milk
- Protective cytokines
- Protects against Necrotizing Enterocolitis

Risk Factors of NEC

- Immature intestinal barrier
- Intestinal ischemia
- Bacterial colonization of the gut
- Hypoxia
- Polycythemia
- Severe cardiopulmonary disease
- PDA and its treatments
- Nutritional substrate in the gut lumen
NEC Statistics

- 6-7% of all premature infants born at 28 weeks gestation or less with birth weights under 1250 grams acquire NEC
- Average cost for infants who acquire NEC is $47,000-$237,000 over and above the average costs incurred for extremely premature infants without NEC
- NEC is one of the leading causes of mortality among these infants.

Decreasing the Incidence of NEC

- Early prenatal care with a strong emphasis on nutrition
- Early removal from respiratory support, and venous and arterial lines
- Providing 100% human milk feedings
- Ideally human milk comes from the infants' own mother
Methods Used to Increase Percentages of Own Mother’s Milk Use

- Early prenatal education
- Early and frequent human milk expression
- Support throughout the infant's hospital stay

Challenges

- Increase in infertility cases
- Breast surgeries
- Insufficient mammary tissue
- Medication incompatibilities
- Post radiation issues
- Disease processes
- Stress
**Changes That Can Be Made**

- 100% Human Milk Feedings
- Standardized Feeding Protocol
- Nutrition Room
- Scanning System

**Percentages of Human Milk Utilization in Our NICU For 501-1500 Gram Infants**
Bronson Mothers’ Milk Bank

Donor Breast Milk

- What it is
- What it is not
Donor Recruitment and Screening

- Healthy lactating women with healthy growing babies or healthy bereaved lactating women
- Donors are screened verbally and in writing
- Serologic screening for HIV-1 and sub O, HIV-2, HTLV I/II, Hepatitis C, Hepatitis B surface antigen and syphilis within 6 months of the first donation
- Physician release for mother and baby

Human Milk Processing

- Thaw
- Pool
- Analyze
- Pasteurize
- Culture
- Freeze
- Dispense
Thaw

Pool
Calais

- Analyzes raw milk through final product
- Determination of fat, protein, lactose, and total solids
- Used on donor milk and own mother’s milk

Human Milk Pasteurizer

- Pasteurizes 68 to 144 bottles in 110 minutes
- Fully automatic
- Bottles are sealed and labeled
- Computerized data logger
Culture

Freeze
Dispense

Types of Milk Available

- 20 calorie/ounce
- 24 calorie/ounce
- Dairy Free
- Low Fat
Ordering Donor Human Milk

- Physician order or prescription is required
- Bulk Order For NICU Units
- Using one bottle for many infants

Uses for Donor Breast Milk

- Term Infant
- Hypoglycemia
- Hyperbilirubinemia
- Chylothorax
- SMA
- Hypogammaglobulinemia
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