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News

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*****Neonatologists look at breast milk
for preterm infants.

DALLAS--Neonatologists at The University of Texas Health Science Center are conducting a study to discover whether breast milk or formula for preterm babies is a better food for the baby which is born especially early. (Neonatologists are newborn specialists.)

While most of these infants develop normally, many of these preterm babies run a significantly higher risk of being handicapped in some way. And many of these handicaps may be due to the effects of early nutritional problems on the developing brain, says Dr. Jon Tyson, assistant professor of pediatrics. Approximately 100 babies weighing less than 1,500 grams (3 lbs., 5 oz.) at birth are born each year at Parkland, the center's major teaching hospital.

While breast milk may be the ideal food for infants born after a normal pregnancy, some neonatologists question whether it has adequate protein and minerals to meet the needs of rapidly growing premature infants. "We are interested in finding the answer to this question," he says, "because it's so important to development--and nutrition is an important part of supportive care."

Without the support from other mothers in the community who are nursing babies at home, this project would not be possible. Donors are recruited from virtually every major hospital in Dallas and from members of the Family Life Information Center and La Leche League.

Milk from volunteer donors is frozen and used in the program. Not only will the frozen milk last longer, it loses less nutritional value. Currently the project is only able to provide milk for one-fourth of these infants, says Tyson.

Whenever possible, mothers of the preterm babies are encouraged to "feed" their own babies during the hospital stay. When these infants are in special nurseries receiving intensive medical care, they are not able to nurse. Also, most babies this young are not able to suck well. The milk is "fed" into their stomachs through tubes. The mothers, however, are encouraged to visit their babies in the special-care nurseries as much as possible, both when they themselves are patients, and after they return home. After the mother returns home, she is encouraged to bring her milk to the hospital for the child.

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first add breast milk

Many mothers of premature infants cannot provide breast milk for the baby, however. Some mothers are too ill. Others are on drugs which interfere with milk production; still others find it difficult to produce milk without the stimulation of the baby. And after leaving the hospital, many mothers may find several trips a day back to the hospital an impossibility because of transportation problems.

"This study at Parkland, which is supported in part by Ross Laboratories, is different from most studies being done on breast feeding," says Tyson. Also involved in the project is Dr. Alan Beer, professor of obstetrics and gynecology and pediatrics.

"It has already been established that breast milk supplies the infant with significant protection against serious infection and necrotizing enterocolitis (an intestinal disorder which is a common cause of infant death). We are dealing only with premature infants to see which kind of milk will support the most normal development of the brain," says Tyson.

Most feeding studies have focused almost entirely on the rate of the infants' growth. Tyson says this study will concentrate on the health, behavior and development of these infants. Performance will be based on the Brazelton Neonatal Assessment Scale, which measures higher central nervous system function and capabilities.

Breast milk will be given only during the period the preterm infant is in the hospital. Mothers may feed the child either by breast or by bottle after the baby is dismissed.

Another question the UT neonatologists are looking at centers around the "bonding" of preterm baby-to-mother. "Bonding" has been associated with nursing and assumed to be coming from the close physical contact experienced between the nursing mother and child.

Perhaps, says, Tyson, the bonding, which is mostly observed as eye contact in the infant, may be related to the nutritional support during a critical stage of brain development. It may be that the quality of an infant's early nutrition significantly affects his response to his mother and, in turn, her response to her baby. If so, then the feeding of premature infants may have long-term effects on their physical, social-psychological development. While infants will receive breast milk only during the time they are hospitalized, babies in both the breast-fed and formula-fed groups will be followed throughout infancy.

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