



DOCTORS ADVISE

More evidence in support of breast-feeding

Research cites stronger leg growth than from artificial formulas

BY UNION-TRIBUNE
TUESDAY, FEBRUARY 1, 2011 AT 12:01 A.M.

Quite naturally, it's assumed mother's milk is the optimum way to feed a newborn. "Breast is best" is the common mantra. And scientific studies continue to support and reinforce that notion. Human milk has been shown to boost brain development, prevent life-threatening infections, decrease allergies and promote stronger bones and a high IQ.

A recent study out of the University of Granada continues that theme. Researchers found that newborns who were breast-fed grew into adolescents with stronger leg muscles than babies who received artificial milk.

The composition of human breast milk is complex and changes somewhat over time. During the first few days after birth, a mother's breast produces colostrums – a thin, yellowish fluid that is low in fat, but rich in proteins and maternal antibodies to boost the newborn's still developing immune and digestive systems.

After a few days, the breast begins producing milk that is thin, watery and sweet, quenching the baby's thirst and providing needed proteins, sugars and minerals. Over time, the milk becomes thicker, creamier, rich in carbohydrates and fat. Typically, it is 7.1 percent carbohydrates, 4.5 percent fat, 0.8 to 0.9 percent protein and 0.2 percent minerals – all derived from the mother's diet.

Even so, much about mother's milk remains mysterious. We asked Dr. Jae Kim, a neonatologist and gastroenterologist at the UCSD Medical Center and medical director of UCSD's Supporting Premature Infant Nutrition program, to elaborate.

Q: How well understood is the chemistry of breast milk? Do we know what, exactly, makes it better than artificial formulas?

A: Much of the identification of what compounds are found in human milk has been accomplished already. What is less known is how these compounds actually function in the milk. There is a long list of proven benefits attributed to human milk over formula milk, largely because of these numerous compounds.

Q: How much of the benefit of breast-feeding is something other than the milk itself, such as the physical act of mother-infant bonding? Is that benefit completely lost with bottle feedings?

A: Hard to say. Many benefits have been ascribed to the contents of human milk, but actual breast-feeding and skin-to-skin contact has been shown to have many positive health benefits to the infant. Bottle-fed babies certainly lose out on the closeness of the physical bonding, but the greater loss is not having biologically active components in the formula milk to help the infants get stronger.

Q: Does the source of the breast milk make a difference to individual babies? Does it matter whether it's from the baby's actual mother or donor milk?

A: This is a great question, and one that is poorly studied. We are just realizing that there might be some genetic variability in human milk that can have an impact on the overall benefits of the milk to an individual child. Studies on

donor milk have not shown it to be similar to mother's milk. Because of processing and the timing of the milk (generally later in lactation), the nutritional and immunologic quality of the (donor) milk is lower.

Q: What's the shelf life for pumped breast milk? Should it be consumed within hours, within a day, longer?

A: Pumped breast milk can stay frozen for six months; refrigerated for three days or kept at room temperature for three to four hours.

Q: Doctors and health organizations tout the superiority of human breast milk, but are there situations or circumstances when alternatives are better?

A: Very few situations. Absolute contraindications include mothers who have HIV, are on radioactive medications or on lithium (a drug used to treat psychiatric conditions like bipolar disorder).

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