

Health Benefits of Donor Human Milk

Helen K. Bellanca, MD, MPH
Medical Advisory Council
Northwest Mothers Milk Bank

Health Benefits of Breast Milk

All infants benefit from breast milk

- Optimal human nutrition for growth and development
- Fewer infections
- Lower rates of asthma, diabetes and obesity
- Fewer allergies

Premature infants benefit from breast milk even more



- Their intestines are underdeveloped and unprepared for food
 - Human milk is far easier to digest than formulas
- They are particularly susceptible to infections
 - Immune protection only available in human milk
- They are not able to produce their own hormones and other important compounds
- Their brains need specialized fats found in human milk

Breast milk isn't always available to a premature infant

- Mother may intend to breastfeed, but her milk hasn't come in, or is insufficient for her baby's needs
- Mother may be too ill to pump her own milk (cancer, trauma, severe health condition)
- Mother may choose not to breastfeed
- Mother may have died in childbirth

American Academy of Pediatrics recommends that all premature infants receive human milk

Box 1

Recently updated AAP policy recommendations (Pediatr 2012;129:e827-41)

1. "The potent benefits of human milk are such that all preterm infants should receive human milk. Mother's own milk, fresh or frozen, should be the primary diet for preterm infants, and it should be fortified appropriately for the infant born weighing less than 1,500 grams."
2. "If mother's own milk is unavailable despite significant lactation support, pasteurized donor milk should be used."
3. "Quality control of pasteurized donor milk is important and should be monitored."

- World Health Organization and UNICEF also endorse donor milk when the mother's own milk is not available

Why donor milk from a milk bank instead of just milk sharing?

A Human Milk bank is critical for safe donation

- Screen donors for infectious diseases
- Pasteurize milk to kill harmful bacteria and viruses
- Pool milk and then divide into standardized units
 - Evens out milk quality, dilutes any questionable substances in milk (over the counter medications, alcohol)
 - Can measure and adjust exact amount of protein, carbohydrates, fats

Evidence supports using donor milk for premature infants

Compared to premature infants given formula, those given donor human milk have:

- Shorter lengths of stay in the Neonatal ICU
 - Average 4 days shorter
 - Savings of \$8167 per infant on average
- Fewer serious infections
- Fewer cases of necrotizing enterocolitis

Necrotizing Enterocolitis (NEC)

- Disease of the intestines of premature infants caused by inflammation/infection and immaturity of the gut.



Necrotizing Enterocolitis (NEC)

Premature infants fed formula have 4 times higher risk of NEC than those fed human milk

- NEC occurs in 1-7% of all NICU admissions
- Medical NEC: Symptoms without perforation of bowel
 - Adds 22 days to hospital stay
 - 14% higher risk of death
 - Costs \$300,000 per case
- Surgical NEC: need to surgically remove part of the intestines
 - Adds 60 days to hospital stay
 - 25% higher risk of death
 - Costs \$450,000 per case
 - Lifelong disability

NEC in Oregon

- 44,000-46,000 births in Oregon each year
 - 2700-3000 premature births
 - 440-500 of those are under 1500gm, severely ill
- There are about 30-50 cases of NEC in Oregon each year
 - Donor human milk would likely prevent 75% of those cases
 - **Cost savings of \$7 million- \$15 million per year in immediate expenses**
 - Lifelong savings from prevention of severe disability that can result from some cases of NEC

Northwest Mothers Milk Bank

- Oregon's NICUs are unable to get the donor milk they need from milk banks in Colorado and California
- NWMMB is ready to start processing milk
- Huge donor base of healthy moms with extra milk
- Premature infants in NICUs are priority
- Could also be used for sick full term infants or adopted infants if supply is sufficient

Prematurity is a health equity issue

- African Americans and American Indians are over-represented in NICUs in Multnomah County
 - 7% of births in MC are to African Americans, but 13.8% of very-low birthweight infants are African American
 - 1% of births in MC are to Native Americans, but 2% of very-low birthweight infants are Native American

Please support Oregon's milk bank

- Strong scientific evidence that donor human milk improves health of premature infants
- AAP, WHO and UNICEF all endorse banked donor milk for premature infants
- Enormous cost savings for our state
- The right thing to do for our most fragile infants and their families



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