

Human Milk's "Secret Ingredients"

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The National Coalition for Infant Health is a collaborative of more than 180 professional, clinical, community health, and family support organizations focused on improving the lives of premature infants through age two and their families. NCfIH's mission is to promote lifelong clinical, health, education, and supportive services needed by premature infants and their families. NCfIH prioritizes safety of this vulnerable population and access to approved therapies.

Researchers may have pinpointed the "secret ingredients" that allow human milk to protect newborns against a life-threatening condition called necrotizing enterocolitis. They are HMOs – human milk oligosaccharides. (1)

Up to 200 different types of HMOs exist, and consuming a diversity of HMOs has been linked with enhanced immune system development, growth, and possibly brain development. The list of benefits grows with the results of a new study. Researchers revealed that extremely low birth weight babies who received human milk with a broader array of HMOs had a lower risk of developing necrotizing enterocolitis, or NEC.(2)

Human milk has long been recommended to reduce the risk of NEC in premature babies, yet some babies fed human milk exclusively still develop the condition. This new information clarifies which components of human milk, specifically which HMOs, provide the protective effect.

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Known as prebiotics, HMOs feed good bacteria, called probiotics – essential to building a healthy intestinal gut that can fight viruses. Prebiotics can also limit the growth of harmful, infection-causing bacteria. HMOs are the third most abundant component of human milk, after fats and carbohydrates.

The health benefits of human milk are well documented. It provides antibodies to ward off GI and ear infections; it lowers babies' risk of asthma, allergies, and respiratory illness, among other benefits. A broader understanding of HMOs' function now bolsters that list.

However, it also underscores a painful disparity. Not every baby has access to human milk. Not all mothers produce milk or enough milk, and some babies are adopted or in foster care. Where available, human milk banks that provide donor milk can help to meet that need. Nevertheless, access and cost remain barriers. There are not enough banks or donated milk.

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Moreover, cost is an issue. Processing and safely delivering human milk is expensive. Not all insurance companies provide coverage for the cost of human milk or human milk-based fortifiers, despite their demonstrated health benefits for fragile infants.

Broader coverage policies could increase access to many, benefiting babies' health and shielding insurance companies from the expense of dangerous and avoidable conditions like NEC.



References:

1. <https://www.youtube.com/watch?v=Qk0wzlxjelQ&t=28s>
2. Wejryd E, Marti M, Marchini G, Werme A, Jonsson B, Landberg E, et al. Low Diversity of Human Milk Oligosaccharides is Associated with Necrotising Enterocolitis in Extremely Low Birth Weight Infants. *Nutrients*. 2018;10(10).

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National Coalition for Infant Health Values (SANE)

Safety. Premature infants are born vulnerable. Products, treatments and related public policies should prioritize these fragile infants' safety.

Access. Budget-driven health care policies should not preclude premature infants' access to preventative or necessary therapies.

Nutrition. Proper nutrition and full access to health care keep premature infants healthy after discharge from the NICU.

Equality. Prematurity and related vulnerabilities disproportionately impact minority and economically disadvantaged families. Restrictions on care and treatment should not worsen inherent disparities.

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