How Do HMOs Support Baby’s Immune Development?

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Scientific Overview

Evidence suggests that Human Milk Oligosaccharides (HMOs) are important immune supporting ingredients in infant development. In a 2016 study, Goehring and colleagues investigated the effects of feeding formulas supplemented with the HMO 2'-fucosyllactose (2'-FL) on biomarkers of immune function in healthy term infants (420 healthy term infants; 201 in immune-study subset) compared to breastfed infants. During the randomized, double-blind, controlled trial, researchers studied ten clinically significant inflammatory cytokines in the circulation of infants. They found an immune response more like breastfed infants when feeding infant formulas fortified with a single HMO (2'-FL).  

Applying to Your Practice

Formulas With 2'-FL HMO Support Important Immune Development

HMOs play multiple roles to help protect baby’s digestive and immune health:

- They act as receptor decoys to prevent pathogens from adhering to cell surfaces. HMOs structurally resemble the sugars that bacteria use to cause infections, so they function as soluble decoys that block the attachment of potentially pathogenic bacteria.
- They are prebiotics and provide multiple gut health associated benefits that support baby’s developing immune system.
- They have the ability to bind to cell surfaces and trigger cells to release protective factors—acting as immune cell modulators.

Key Takeaways

Recommend Formulas With 2'-FL HMO to Strengthen Baby’s Immune System Like Breastfed Infants

1. HMOs support the developing immune system and are associated with reduced incidence of gastrointestinal and respiratory illness and less eczema.

2. Infant formulas containing this immune nourishing ingredient help strengthen the immune system to be more like breastfed infants.

References: