

Impact of Necrotizing Enterocolitis on the Barrier Properties of Intestinal Mucus*

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Necrotizing enterocolitis (NEC), a disease afflicting premature infants, is associated with life-threatening intestinal infection by commensal bacteria. Intestinal mucus is a natural hydrogel controlling microbe access to underlying epithelium. In this study, the potential role of altered mucus barrier properties in NEC was explored using multiple particle tracking. The mucus barrier in an animal model of NEC was less obstructive to particle penetration compared to control mucus. This change in transport suggests an alteration in mucus barrier properties and supports the development of a therapeutic treatment to modulate the mucus layer could reduce permeability and potential risk of NEC.

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