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[\[PDF \(327K\)\]](#) [\[References\]](#)**Intraperitoneal injection of lactoferrin ameliorates severe albumin extravasation and neutrophilia in LPS-induced inflammation in neonatal rats**Masako YAJIMA¹⁾, Takaji YAJIMA¹⁾ and Tamotsu KUWATA¹⁾

1) Institute of Nutrition Science, Meiji Dairies Corporations

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ABSTRACT

Lactoferrin (LF) plays various anti-inflammatory roles in inflammation experimentally induced by lipopolysaccharides (LPS). But the effects of LF on albumin extravasation and neutrophilia have not been elucidated. We aimed to study the effects of LF on albumin extravasation, neutrophilia and/or on other symptoms in inflammation caused by LPS in rats. Human lactoferrin (hLF) was injected (10 mg/100 mL in PBS) 18 h, or 15 min prior to, or 60 min after intraperitoneal injection of LPS in 13 days old Sprague Dawley rats.

Prophylactic injection of hLF significantly ameliorated albumin extravasation in ascitic fluid at 5 h and neutrophilia in the blood at 24 h after LPS injection, but the after-injection of hLF did not. Interestingly, an injection of rat anti-TNF α IgG 15 min prior to LPS injection did not ameliorate albumin extravasation. Prophylactic injection of hLF significantly ameliorated other symptoms like mortality, and the decrease of phagocytotic activity of peritoneal polymorpho-nuclear leukocytes (PMNL), but did not ameliorate the decrease of platelets in the plasma. These findings suggest that hLF may be available as a medical treatment prior to surgery for prophylaxis of side effects like albumin extravasation or neutrophilia.

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