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Beneficial effects of nutritional supplements on intestinal epithelial barrier functions in experimental colitis models *in vivo*

Vargas-Robles H *et al.* Nutritional supplements protect against EBD

Hilda Vargas-Robles, Karla Fabiola Castro-Ochoa, Alí Francisco Citalán-Madrid,
Michael Schnoor

Abstract

Acute and chronic colitis affect a huge proportion of the population world-wide. The etiology of colitis cases can be manifold and diet can significantly affect onset and

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A reliable experimental model is the dextran sulfate sodium (DSS) colitis model in mice, which reproduces many of the clinical signs of ulcerative colitis in humans. We recently applied this model to test the beneficial effects of a nutritional supplement containing vitamins C and E, L-arginine, and ω 3-polyunsaturated fatty acids (PUFA).

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Inflammatory bowel diseases (IBD), including Crohn's disease and ulcerative colitis, are chronic relapsing disorders of the intestines. They cause severe problems, such as abdomin

The role of intestinal epithelial barrier function in the ...

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Jan 22, 2015 · The **intestinal epithelial barrier** plays an important role in maintaining host health. Breakdown of **intestinal barrier function** is known to play a role in many diseases such as infectious enteritis, idiopathic inflammatory bowel disease, and neonatal inflammatory bowel diseases.

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Mar 03, 2016 · Therefore, the **beneficial effect** of MF feeding on colitis is at least partly attributed to the induction of colonic Treg differentiation by SCFA, especially butyrate. Increased **intestinal permeability** has been linked to a variety of inflammatory disorders such as CD, and reduced **barrier function** is a marker of impending disease reactivation.

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Author: Honggang Wang, Honggang Wang, Peilia...

Publish Year: 2016 Author: Wang, Honggang

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Aug 16, 2018 · RGal attenuates intestinal epithelial barrier dysfunction induced by IL-1 β . The treatment of Caco-2 cell monolayer with IL-1 β leads to disruption of intestinal barrier function in vitro and causes loss of barrier integrity 16. To further determine if the RGal promotes a ...

Author: Daniele Maria-Ferreira, Adamara Mac...

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Dysfunction of the intestinal epithelial barrier is associated with **IBD pathogenesis**, and therapies include **anti-inflammatory drugs** that enhance intestinal barrier function.

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However, it is still not well known how **nutritional supplements affect IBD pathogenesis** in general and epithelial barrier integrity in particular . The **DSS colitis** model has been useful in such studies since it resembles several clinical signs of **human IBD** such as **weight loss, diarrhea, inflammation**, and **epithelial barrier dysfunction** [31].

Cited by: 7

Author: Hilda Vargas Robles, Alf Francisco Citalá...

Publish Year: 2016

Academic Editor: Noriko Noguchi

Protection and Restitution of Gut Barrier by Probiotics ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3864899>

May 01, 2013 · Probiotics preserve the **intestinal barrier** in mouse **models** of **colitis** and reduces the **intestinal permeability** in human patients . **PROBIOTIC EFFECTS ON GUT BARRIER FUNCTION**

Although the clinical implication of probiotic was first indicated in 1954 [44], most progress in probiotic research has been done only during the past two decades.



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Cited by: 82

Author: Radha Krishna Rao, Geetha Samak

Publish Year: 2013

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Author: Honggang Wang, Honggang Wang, Peilia...

Publish Year: 2016 Author: Wang, Honggang