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Title

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MECHANISMS AND CONSEQUENCES OF INTESTINAL DYSBIOSIS

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Mechanisms and consequences of intestinal dysbiosis.

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Abstract

The composition of the gut microbiota is in constant flow under the influence of factors such as the diet, ingested drugs, the intestinal mucosa, the immune system, and the microbiota itself. Natural variations in the gut microbiota can deteriorate to a state of dysbiosis when stress conditions rapidly decrease microbial diversity and promote the expansion of specific bacterial taxa. The mechanisms underlying intestinal dysbiosis often remain unclear given that combinations of natural variations and stress factors mediate cascades of destabilizing events. Oxidative stress, bacteriophages induction and the secretion of bacterial toxins can trigger rapid shifts among intestinal microbial groups thereby yielding dysbiosis. **A multitude of diseases including inflammatory bowel diseases but also metabolic disorders such as obesity and diabetes type II are associated with intestinal dysbiosis.** The characterization of the changes leading to intestinal dysbiosis and the identification of the microbial taxa contributing to pathological effects are essential prerequisites to better understand the impact of the microbiota on health and disease.

KEYWORDS: Bacteria; Bacteriocins; Bacteriophage; Cancer; Cytokine; Mucin; Necrotizing enterocolitis; Oxidative stress

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