Nutrigenetics, nutrigenomics and inflammatory bowel diseases.

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Inflammatory bowel disease includes ulcerative colitis and Crohn's disease, which are both inflammatory disorders of the gastrointestinal tract. Both types of inflammatory bowel disease have a complex etiology, resulting from a genetically determined susceptibility interacting with environmental factors, including the diet and gut microbiota. Genome Wide Association Studies have implicated more than 160 single-nucleotide polymorphisms in disease susceptibility. Consideration of the different pathways suggested to be involved implies that specific dietary interventions are likely to be appropriate, dependent upon the nature of the genes involved. Epigenetics and the gut microbiota are also responsive to dietary interventions. Nutrigenetics may lead to personalized nutrition for disease prevention and treatment, while nutrigenomics may help to understand the nature of the disease and individual response to nutrients.

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