

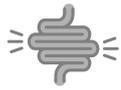


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# IBD & THE GUT

WHITEPAPER



## INFLAMMATORY BOWEL DISEASE

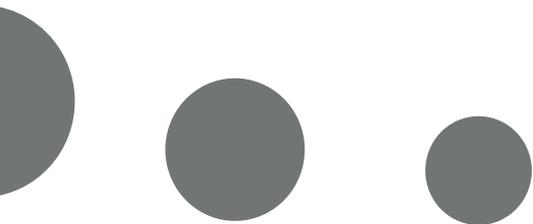
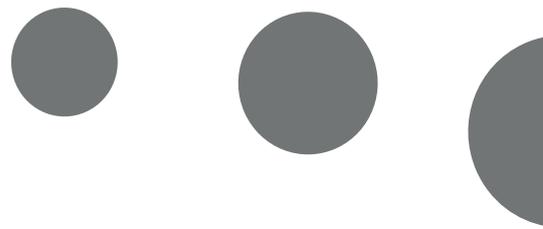
Inflammatory bowel disease (IBD) are chronic diseases of gastrointestinal tract and includes two conditions: Crohn's disease and ulcerative colitis (UC). People of any age can be affected by IBD; however, the majority of case are detected between the ages of 15 – 40 years. UC affects only the large intestine while Crohn's disease can involve different parts of the digestive tract. The most prevalent symptoms of IBD are abdominal pain, diarrhoea, fatigue and weight loss. Currently there is no cure to treat IBD, and some severe cases require surgical intervention such as the removal of the affected area, as the only means to ease the condition.<sup>(116)</sup>

Genes play an important role in susceptibility to IBD. Research suggests that alterations in DNA associated with the development of IBD also frequently impairs genes which are responsible for a protective gut barrier and immune responses<sup>(117)</sup>.

Apart from genetics, alterations in the gut bacteria have been associated with IBD. For instance, dysbiosis – an imbalance in the gut microbial community, is often an accompanying attribute to this condition<sup>(118)</sup>. Geographical distribution of IBD demonstrates a pattern, with the majority of cases being in industrialised, well-developed parts of the world. Possible explanations for this are the excessive hygiene of modern urban areas with reduced microbial diversity and a Western diet pattern, rich in animal fat and protein whilst low in fibre. These factors can be responsible for the reduction of the gut bacteria diversity leading to dysbiosis and altered immune responses linked to IBD<sup>(119)</sup>.

Moreover, people with IBD seem to have less Short-Chain Fatty Acids (SCFAs) produced in the gut by bacteria. SCFAs are substances with anti-inflammatory properties and, importantly, support the healthy barrier function of the gut<sup>(120)</sup>. These facts suggest that insufficiency of SCFAs may be involved in the pathogenesis of IBD. Therefore to tackle the underlying issue, increasing fibre consumption (or taking prebiotic supplements) will increase SCFAs present, reducing digestive inflammation, which in some instances could in time reduce or remove symptoms.





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