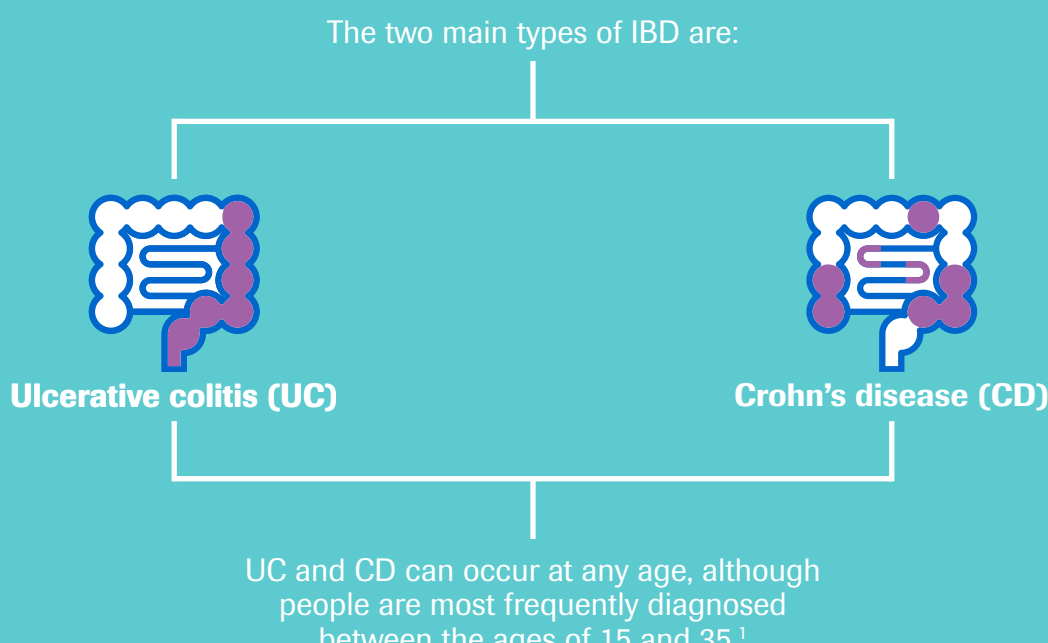


Inflammatory bowel diseases (IBD): A complex, heterogeneous group of diseases

Different diseases



Different causes

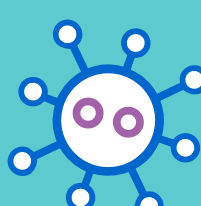
IBD is characterised by a complex set of disease-causing mechanisms that can include:



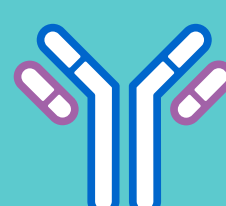
Environmental



Genetic



Gut microbiota



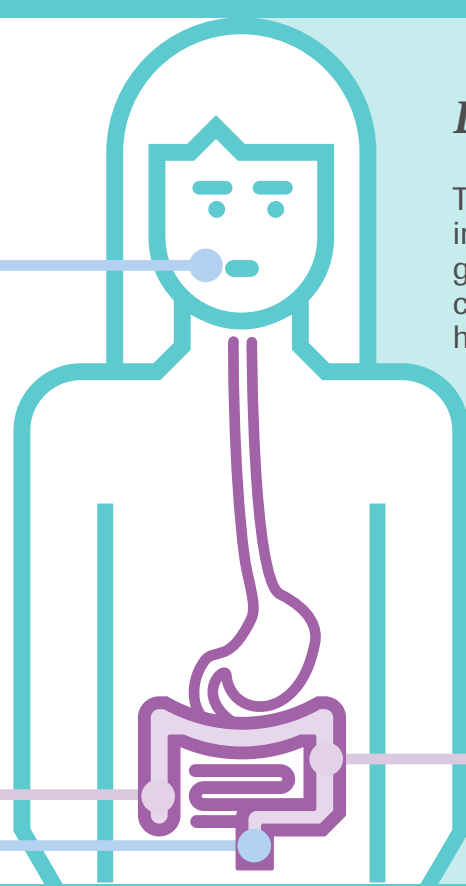
Immune-related factors

By themselves, these factors might not cause IBD. Rather, IBD is most likely triggered by complex interactions between them.^{2,3}

Different location

In UC, inflammation specifically affects the colon (i.e. large intestine).⁵

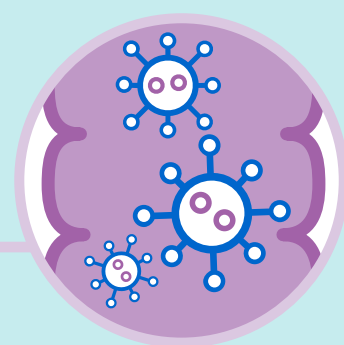
In CD, inflammation can affect any part of the gastrointestinal tract from the mouth to anus.⁴



Different gut bacteria

There are trillions of bacteria that live in the gut and interact with our own gut cells. This interaction may be critical to maintaining our health and have a key role to play in IBD.

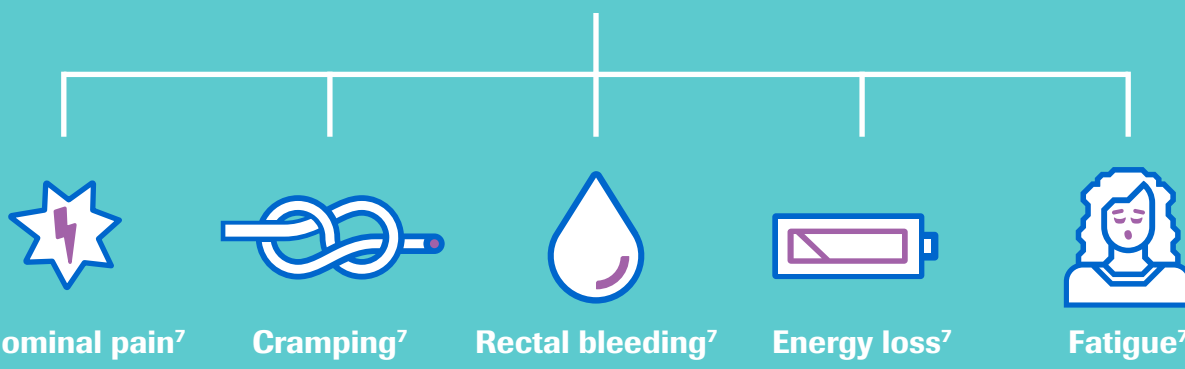
Low diversity and altered abundance of gut bacteria have been associated with IBD.⁶



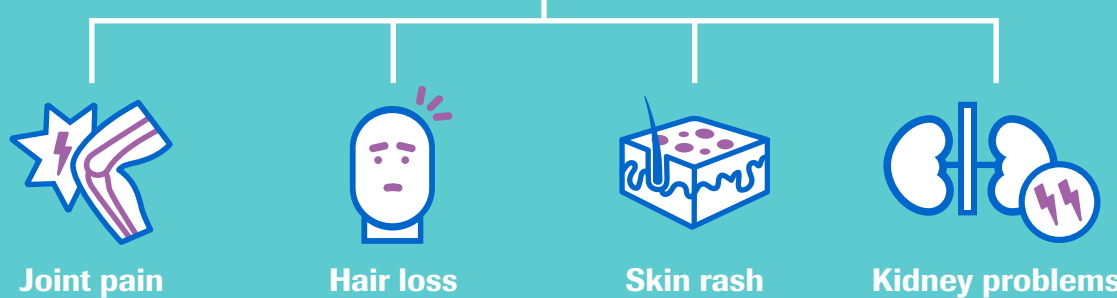
Different symptoms



Symptoms vary from person to person and can include:



25 - 40%⁸
of IBD patients experience symptoms outside of the intestine, such as:



Some patients have to urgently use the bathroom more than 20 times a day. The disease varies in intensity, with some patients having more aggressive disease than others.¹

Different response to treatment

Treatment response varies greatly from patient to patient:



Around 80% of patients
do not experience sustained full remission.⁹

Inadequate treatment of IBD can lead to

permanent intestinal damage

sometimes due to excessive and continuous inflammation.¹⁰

There is an unmet need for treatment approaches that control not only the symptoms reported by patients, but also the underlying biology of the disease, to help patients achieve rapid and sustained remission and live life confidently.

1. Crohn's and Colitis Foundation. The facts about Inflammatory Bowel Diseases. [Internet; cited 2019 March 29] Available at: <https://www.crohnscolitisfoundation.org/assets/pdfs/updatedibdfactbook.pdf>

2. Rubin DC, Shaker A and Levin MS. Chronic intestinal inflammation: inflammatory bowel disease and colitis-associated colon cancer. *Front Immunol.* 2012; 3: 107.

3. Scientia. Dr Claudio Fiocchi - An Integrated Approach to Fighting Inflammatory Bowel Disease. [Internet; cited 2019 March 29] Available at: <https://www.scientia.global/dr-claudio-fiocchi-an-integrated-approach-to-fighting-inflammatory-bowel-disease/>

4. Crohn's and Colitis Foundation. Crohn's causes. [Internet; cited 2019 March 29] Available at: <https://www.crohnsandcolitis.com/crohns/causes>

5. Garud S and Peppercorn MA. Ulcerative Colitis: Current Treatment Strategies and Future Prospects. *Therap Adv Gastroenterol.* 2009 Mar; 2(2): 99-108.

6. Ni J, et al. Gut microbiota and IBD: causation or correlation? *Nat Rev Gastroenterol Hepatol.* 2017 Oct; 14(10): 573-584.

7. Crohn's and Colitis Foundation. What are Crohn's & Colitis? [Internet; cited 2019 March 29] Available at: <https://www.crohnscolitisfoundation.org/what-are-crohns-and-colitis/>

8. Levine JS and Burakoff R. Extraintestinal Manifestations of Inflammatory Bowel Disease. *Gastroenterol Hepatol (N Y).* 2011 Apr; 7(4): 235-241.

9. Sandborn WJ. The Present and Future of Inflammatory Bowel Disease Treatment. *Gastroenterol Hepatol (N Y).* 2016 Jul; 12(7): 438-441.

10. WebMD. Inflammatory Bowel Disease. [Internet; cited 2019 March 29]. Available from: <https://www.webmd.com/ibd-crohns-disease/inflammatory-bowel-syndrome#1>.