


In the UK, 1 in 210 people have IBD¹

...what is it?

- ❑ Long-term condition characterised by inflammation of the gut
- ❑ 2 main types: Crohn's disease and ulcerative colitis
- ❑ Symptoms include swelling and pain in the tummy, diarrhoea, fatigue, weight loss, and many others
- ❑ Episodes of more apparent symptoms= 'flare-ups'

...what causes it?

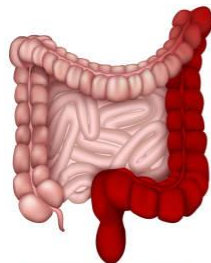
- ❑ We don't know the exact cause!
- ❑ Thought to be mediated by the cells of our immune system and has been linked to the barrier of the gut being impaired² 
- ❑ Likely to be a combination of genetic and environmental factors

...how is it tested for in biochemistry?

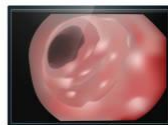
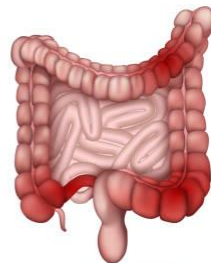
- ❑ Blood is tested for C-reactive protein (CRP) (this is an indicator of inflammation), iron levels, and vitamins. However, none of these are specific to the intestines, so...
- ❑ Faeces are tested for calprotectin, an anti-microbial protein released by white blood cells when there is inflammation in the intestines. The more inflammation present, the higher the calprotectin. This test increases the certainty of diagnosis, differentiates between IBD and IBS, and determines the need for colonoscopy.
- ❑ Tests done outside of biochemistry include:
 - endoscopy (a camera on a tube to look at the gut. It can take tiny pieces of tissue to look at down a microscope)
 - ultrasound, CT, and MRI

Inflammatory Bowel Disease (IBD)

***Note:** IBD is not to be confused with irritable bowel syndrome (IBS) as they are different things (although you can have both IBD and IBS at the same time!)¹ IBS shows no abnormal biochemistry results*



Ulcerative colitis



Crohn's disease

This is an illustration of the gut in IBD³. Ulcerative colitis affects the large intestine, most commonly the rectum⁴. Crohn's can affect any part of the gastrointestinal tract⁴. Ulcers and erosions can be seen in the gut of IBD patients, with Crohn's sometimes causing a 'cobblestone' appearance of the intestines⁵.

...can it be cured?

- ❑ There is no cure for IBD but there are a variety of treatments available such as drugs, like infliximab⁶, which reduce inflammation. In some cases, surgery is required.

- (1) **Crohn's & Colitis UK.** (2020). *All about Crohn's and Colitis*. [Online]
Available at: http://s3-eu-west-1.amazonaws.com/files.crohnsandcolitis.org.uk/Publications/all_about.pdf
[Accessed 7th December 2021]
- (2) **Merga Y., Campbell B.J. and Rhodes J.M.** (2014) Mucosal Barrier, Bacteria and Inflammatory Bowel Disease: Possibilities for Therapy. *Digestive Diseases*. **32**: 475-483.
- (3) **Getty Images** (2021). Available at: <https://www.istockphoto.com/photos/inflammatory-bowel-disease>
- (4) **Corridoni B., Arseneau K.O. and Cominelli F.** (2014) Inflammatory Bowel Disease. *Immunology Letters*. **161**: 231-235.
- (5) **Nomura Y., Moriichi K., Fujiya M. and Okumura T. (2017).** The endoscopic findings of the upper gastrointestinal tract in patients with Crohn's disease. *Clinical Journal of Gastroenterology*. **10**: 289–296. <https://doi.org/10.1007/s12328-017-0759-7>
- (6) **Adegbola S. O., Sahnun K., Warusavitarne J., Hart A. and Tozer P.** (2018) Anti-TNF Therapy in Crohn's Disease. *International Journal of Molecular Sciences*. **19**: 2244.

Image of double helix: **Garber M.** (2012). *What DNA Actually Looks Like* [Online]
Available at: <https://www.theatlantic.com/technology/archive/2012/11/what-dna-actually-looks-like/265713/>
[Accessed 7th December 2021]