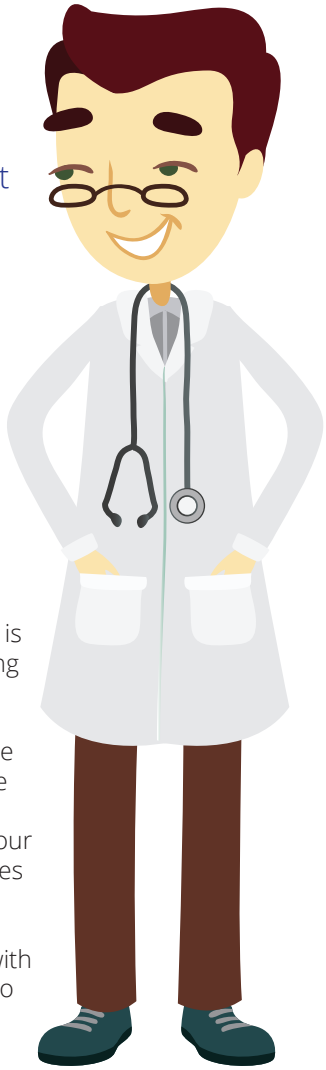
Monitoring inflammation in IBD

Over the years, the science of medicine has transformed into a complex art. Not only do treatments play a significant role in maintaining health, but so do the diagnostic tests that monitor disease.



Today, we have tests that measure the quantity of specialized medications circulating through the bloodstream and, over the past decade, biologic therapies have progressively become more effective in treating individuals with IBD. Crohn's disease, one of two forms of IBD, causes inflammation throughout the digestive tract. The digestive tract is a complex system that is responsible for digesting food, absorbing nutrients and providing fuel to thrive. Ulcerative colitis, the second main form of IBD, results in inflammation within the lining of the colon. Both Crohn's disease and ulcerative colitis cause the overproduction of a protein called tumour necrosis factor (TNF)α, which itself causes inflammation within the digestive tract.

Individuals who have been diagnosed with IBD undergo continuous assessments to monitor their level of inflammation and response to prescribed medications. Now, there are two newer ways to monitor disease activity: the first using therapeutic drug monitoring (TDM), and the second using fecal calprotectin testing.

Therapeutic drug monitoring

Different people metabolize drugs differently, and it can be difficult to find an appropriate dose that works for every single person - this is particularly tricky in young people, who are growing and developing. By using TDM, which measures the concentration of a drug in the bloodstream, doctors are able to learn about an individual's response to a drug in more detail. This then allows doctors to adjust the prescribed dose to ensure the medication is working as effectively as possible, thereby optimizing treatment and providing the best care. TDM was created for individuals with IBD who are using biologic therapies, with the aim of better managing their disease and helping to prevent it from progressing. Many drugs that require TDM are typically taken in the long term, as is the case with biologics. Maintaining a steady concentration of a biologic therapy can be tricky as individuals age or experience life changes such as pregnancy, infection or surgery - all of these factors can change the amount of drug needed. TDM follows these changes, and can identify when a person might need a higher or lower dose.

Fecal calprotection

A second diagnostic test used to monitor disease activity uses is fecal calprotectin. Calprotectin is a protein found in neutrophils, a type of white blood cell responsible for responding to infection, inflammation and bacteria in the body. In IBD, neutrophils accumulate when inflammation is present in the intestine and calprotectin is released into the feces. When the concentration of calprotectin in stool is high, so too is the level of inflammation in the intestine. A high level of fecal calprotectin can indicate disease activity. As calprotectin is a biomarker, this test can be used to help physicians and patients adjust IBD treatments to best monitor and manage disease activity. Ultimately, closer disease and drug monitoring with TDM and fecal calprotectin provide impactful and non-invasive ways of avoiding flares, and improving health and quality of life.

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ROBBIE'S RAINBOW MISSION

Our mission is to help improve the health and quality of life of children and teens living with Crohn's disease and ulcerative colitis (IBD).

We are committed to helping guide and support IBD families, teens and children by providing access to critical treatments and care, building educational resources and patient advocacy.

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