RIVER CITY
GASTROENTEROLOGY

Ulcerative Colitis

Understanding your condition and your treatment options

WHAT IS ULCERATIVE COLITIS?

Ulcerative colitis (UC) is a long-term disease that causes inflammation and ulcers (open sores) in the inner lining of the large intestine (colon) and rectum. UC is one of the two main forms of inflammatory bowel disease (IBD); the other is Crohn's disease.[1,2]

Normally, the large intestine absorbs water from stool and turns it from liquid to solid. With UC, the inflamed lining cannot do this properly, causing bleeding, pus, diarrhoea, and abdominal discomfort.

WHAT CAUSES UC?

The exact cause is not fully understood. The immune system appears to react abnormally to bacteria in the digestive tract, triggering ongoing inflammation. UC sometimes runs in families. Emotional stress does not cause UC, but it can make symptoms worse. Food sensitivities do not cause UC, but some foods may trigger flare-ups.[3,4]

SYMPTOMS

The most common symptoms are abdominal discomfort and bloody or mucus-filled diarrhoea. Others include:[1,4]

- Anaemia (low red blood cell count)
- Fatigue and fever
- Nausea and weight loss
- Loss of appetite
- Rectal bleeding
- Skin rashes or sores
- Slow growth in children

Around 10% of people experience severe symptoms including high fevers, heavy bleeding, and intense cramps. UC can also cause joint pain, eye irritation, kidney stones, liver disease, and weakened bones. These complications are thought to be linked to immune system inflammation.[3]

WHO GETS UC?

UC most often develops between ages 15 and 30 and affects men and women equally. People with a close family member who has IBD are at higher risk.[1,4]

DIAGNOSIS

UC is diagnosed through a combination of physical examination, blood and stool tests, and one or more of the following procedures:[4]

- **Blood tests**: check for inflammation, anaemia, and other signs of disease activity
- **Stool tests**: detect blood, infection, or other bowel abnormalities
- **Colonoscopy or flexible sigmoidoscopy**: a thin flexible camera examines the bowel lining. Small tissue samples (biopsies) are taken for analysis. These are the most accurate diagnostic tests.
- **CT scan and barium enema X-ray**: imaging tests that show structural abnormalities

- **MR Enterography (MRE)**: an MRI-based scan that provides detailed images of the large and small intestine without using any radiation. Patients drink a liquid preparation beforehand to fill and expand the bowel, making it easier to see on the scan. MRE can assess the full thickness of the bowel wall, detect active inflammation, and identify complications such as strictures (narrowings). Because it uses no radiation, it can be safely repeated over time to monitor disease and treatment response. MRE is available at major hospitals and specialist imaging centres across Australia.[10]
- **Intestinal ultrasound (IUS)**: a non-invasive, radiation-free technique that uses sound waves to examine the bowel wall from outside the abdomen. IUS can detect bowel wall thickening, increased blood flow, and other signs of active inflammation. It is increasingly used in Australia as a quick, safe, and repeatable way to monitor disease activity and treatment response, without the need for bowel preparation or sedation.[11]

INTESTINAL ULTRASOUND AND MR ENTEROGRAPHY

Both intestinal ultrasound (IUS) and MR enterography (MRE) are radiation-free imaging tools that are increasingly used alongside colonoscopy for monitoring IBD in Australia. IUS can be performed in the clinic during a standard appointment, while MRE provides detailed cross-sectional images at a specialist radiology centre. Ask your gastroenterologist which monitoring approach is most appropriate for you.

TREATMENT

Treatment is tailored to each person based on symptom severity. No medication cures UC, but many can reduce symptoms and maintain remission, which are periods when symptoms ease or disappear for months or years.[3,4]

Conventional medications

- **Aminosalicylates (5-ASA)**: such as sulfasalazine, mesalamine, or balsalazide. Reduce inflammation. Usually the first treatment tried. Can be given by mouth, suppository, or enema.[3]
- **Corticosteroids (steroids)**: such as prednisone. Reduce inflammation more powerfully. Used for severe flare-ups only; not suitable for long-term use due to side effects (weight gain, mood changes, bone loss).[3]
- **Immunomodulators**: such as azathioprine or 6-mercaptopurine. Calm the immune system. Slow-acting (3-6 months). Used when 5-ASA medications are not effective.[3]

Other medications may be used to manage pain, reduce diarrhoea, or treat infection.

Hospitalisation

If symptoms become severe, such as heavy bleeding or dehydration, hospitalisation may be needed for IV fluids, medications, or special feeding.

ADVANCED THERAPIES

For people with moderate to severe UC that has not responded adequately to conventional treatments, a range of advanced therapies are now available in Australia. These include biologic medicines (which target specific proteins involved in inflammation) and small molecule therapies (which are taken orally and work inside the cells of the immune system). Your gastroenterologist will discuss which option is most appropriate based on your disease activity, other health conditions, and medication history.[4,6,12]

Many of these therapies are available on the Australian Pharmaceutical Benefits Scheme (PBS) for eligible patients with moderate to severe UC.[12]

MEDICATION	TYPE	BRAND NAME	HOW IT WORKS	HOW GIVEN
Infliximab	Biologic (anti-TNF)	Remicade Inflectra Remsima	Blocks tumour necrosis factor (TNF), a protein that drives inflammation	IV infusion (every 8 weeks after loading doses) Subcutaneous injection every 2 weeks.
Adalimumab	Biologic (anti-TNF)	Humira Amgevita Hadlima	Blocks TNF; self-injected at home	Subcutaneous injection (fortnightly or weekly)
Vedolizumab	Biologic (anti-integrin)	Entyvio	Blocks a protein (integrin) that directs immune cells into the gut; gut-selective with a favourable safety profile	IV infusion or subcutaneous injection
Ustekinumab	Biologic (anti-IL-12/23)	Stelara	Blocks interleukins 12 and 23, proteins that promote inflammation; effective for both gut and joint symptoms	IV loading dose, then subcutaneous injection every 8 weeks
Etrazimod	Small molecule (S1P modulator)	Velsipity	Traps certain immune cells in lymph nodes, reducing the number that enter the gut to cause inflammation	Oral tablet (once daily)
Tofacitinib	Small molecule (JAK inhibitor)	Xeljanz	Inhibits JAK enzymes inside immune cells, rapidly reducing inflammatory signals	Oral tablet (twice daily)
Upadacitinib	Small molecule (selective JAK1 inhibitor)	Rinvoq	Selectively inhibits JAK1, a key enzyme in the inflammatory cascade; highly effective for induction and maintenance	Oral tablet (once daily)

IMPORTANT NOTE ABOUT ADVANCED THERAPIES

All advanced therapies carry some risk of side effects, including increased susceptibility to infection. **Discuss the benefits and risks of each option carefully with your gastroenterologist.** Before starting a biologic or small molecule therapy, you will usually need blood tests, screening for tuberculosis, and up-to-date vaccinations.[4,6]

For the most up-to-date information on PBS eligibility and access, visit www.pbs.gov.au or speak with your gastroenterologist.

Specific references for advanced therapies:[6,7,8,9]

- Infliximab and adalimumab (anti-TNF biologics): established first-line biologic options with over 20 years of evidence in UC.
- Vedolizumab (anti-integrin): gut-selective biologic particularly useful for people who prefer limited systemic immune effects.[6]

- Ustekinumab (anti-IL-12/23): effective for both gut and joint/skin manifestations of IBD.[6]
- Etrazimod (S1P receptor modulator): a newer oral option that works by retaining immune cells away from the gut.[7]
- Tofacitinib (JAK inhibitor): a fast-acting oral therapy useful for people with severe or steroid-dependent UC.[8]
- Upadacitinib (selective JAK1 inhibitor): among the most effective therapies for achieving remission in moderate to severe UC, with a rapid onset of action.[9]

SURGERY

Around 10-40% of people with UC eventually need surgery to remove the rectum and part or all of the colon (proctocolectomy). Surgery may be followed by:[4]

- **Ileoanal pouch anastomosis ("pouch surgery")**: an internal pouch is created from the small intestine, allowing normal bowel movements. Most people have good long-term outcomes with this option.
- **Ileostomy**: the small intestine is connected to an opening in the abdomen (stoma). Stool is collected in an external pouch. A trained nurse will teach you how to manage this.

DIET AND NUTRITION

No diet cures UC, but these general tips can help manage symptoms:[1,4]

- Avoid carbonated drinks and high-fibre foods (such as corn and nuts) during flare-ups
- Try to avoid ultra processed food where possible
- Stick to bland, easy-to-digest foods when symptoms are active

If you are not absorbing enough nutrients, vitamin and mineral supplements may be recommended.

COLON CANCER RISK

People whose entire colon has been affected by UC for more than 8-10 years have a higher risk of colon cancer. Regular colonoscopies every 1-5 years are recommended to monitor for precancerous changes (dysplasia). Surgical removal of the colon eliminates this risk.[5]

RESOURCES AND SUPPORT

- **Crohn's and Colitis Australia:** 1800 138 029 | www.crohnsandcolitis.com.au - Support, education, and community for people living with IBD
- **IBD Connect Australia:** www.ibdconnect.com.au - Peer support and community for IBD patients
- **Ostomy Australia:** www.ostomyaustralia.com.au - Support for people living with a stoma
- **NPS MedicineWise - IBD medicines:** www.nps.org.au - Consumer information on biologic and advanced therapies used in IBD

REFERENCES

1. Gastroenterological Society of Australia (GESA). (2023). Inflammatory bowel disease: position statement. https://www.gesa.org.au
2. Crohn's and Colitis Australia. (2024). About inflammatory bowel disease. https://www.crohnsandcolitis.com.au
3. Lamb CA, et al. (2019). British Society of Gastroenterology consensus guidelines on the management of IBD in adults. Gut, 68(Suppl 3), s1-s106.
4. Rubin DT, et al. (2019). ACG Clinical Guideline: Ulcerative Colitis in Adults. American Journal of Gastroenterology, 114(3), 384-413.
5. Cancer Council Australia. (2024). Bowel cancer surveillance for people with IBD. https://www.cancer.org.au
6. Feuerstein JD, et al. (2020). AGA Clinical Practice Guidelines on the Management of Moderate to Severe Ulcerative Colitis. Gastroenterology, 158(5), 1450-1461.

7. Sandborn WJ, et al. (2019). Ozanimod induction and maintenance treatment for ulcerative colitis. New England Journal of Medicine, 381(18), 1750-1761.
8. Sandborn WJ, et al. (2012). Tofacitinib, an oral Janus kinase inhibitor, in active ulcerative colitis. New England Journal of Medicine, 367(7), 616-624.
9. Danese S, et al. (2022). Upadacitinib as induction and maintenance therapy for moderately to severely active ulcerative colitis. The Lancet, 399(10341), 2113-2128.
10. Rimola J, et al. (2017). MR enterography for assessment of disease activity in Crohn's disease: novel magnetic resonance-based biomarkers for bowel damage. Journal of Crohn's and Colitis, 11(12), 1470-1477.
11. Allocca M, et al. (2023). Accuracy of intestinal ultrasound in assessing inflammatory bowel disease activity and disease extent. Journal of Crohn's and Colitis, 17(2), 174-185.
12. Australian Pharmaceutical Benefits Scheme (PBS). (2024). Biological medicines for IBD. https://www.pbs.gov.au