

# Fact Sheet

News from the IBD Help Center

## TARGETED SYNTHETIC SMALL MOLECULES

Targeted synthetic small molecules are medicines that help reduce inflammation by specifically targeting parts of the immune system that play a role in inflammation in the intestine and other organs. There are two types of small molecules currently available to treat IBD: JAK inhibitors and S1P receptor modulators.

### JAK Inhibitors

- They can be taken orally and directly absorbed into the bloodstream through the intestines.
- They block the activity of one or more JAK enzymes found in cells and regulate the overactive immune system.
- Tofacitinib and upadacitinib are FDA-approved for adults with moderate-to-severe Crohn's disease and ulcerative colitis.
- Common side effects include upper respiratory tract infections, headache, fatigue, acne, and a higher risk for developing shingles.

### S1P (sphingosine 1-phosphate) Receptor Modulators

- They can be taken orally and directly absorbed into the bloodstream through the intestines.
- They work by preventing the migration of immune cells from the lymph nodes to the intestines where they cause inflammation in ulcerative colitis.
- Ozanimod and etrasimod are FDA-approved for adults with moderate-to-severe ulcerative colitis.
- Common side effects include infections, elevated liver enzymes, headache, and dizziness.
- Do not take ozanimod or etrasimod if in the last 6 months you experienced myocardial infarction, unstable angina pectoris, stroke, transient ischemic attack, decompensated heart failure requiring hospitalization, or Class III or IV heart failure or have or have had a history of unusual heartbeats (arrhythmia) that is not corrected by a pacemaker.

Other important points to know about this class of medication:

- While on one of these medications, it is important to be vaccinated against infections that are preventable. You must, however, avoid live vaccines while you are on one of these agents.
- Prior to starting these medications, your healthcare team will request blood work. Blood work collected may include blood counts to look for anemia or a low white blood cell count, chronic infections, such as tuberculosis (TB) and hepatitis B, liver and kidney function tests, and cholesterol levels.

[Animated Video](#)

[View the full list of FDA-approved targeted synthetic small molecules commonly prescribed for IBD](#)

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