

Leflunomide



PLAY PICMONIC

Use And Mechanism

Immunosuppressant Used In Rheumatoid Arthritis

[Moon suppressed by Roman-King Arthur](#)

Leflunomide is an immunosuppressant drug most commonly used in the management of moderate to severe rheumatoid arthritis. By suppressing the T cell response, leflunomide aids in reducing some of the chronic inflammation that leads to long term joint degeneration and deformation in rheumatoid arthritis.

DMARD

[Darts](#)

Leflunomide is classified as a DMARD, or Disease Modifying Anti-Rheumatic Drug. This class or group of drugs is characterized by their ability to slow the progression of rheumatoid arthritis over the long term, as opposed to other anti-inflammatory medications which may only temporarily ease pain and inflammation associated with acute flares. Other drugs in this class include methotrexate, hydroxychloroquine, and minocycline.

Inhibits Dihydroorotate Dehydrogenase

[Die-hydra-orator-dehydrogenator with chains](#)

Leflunomide acts by inhibiting the enzyme dihydroorotate dehydrogenase, which is a key enzyme in pyrimidine synthesis.

Blocks Pyrimidine Synthesis And T-Cell Proliferation

[No-sign pyramid and tennis balls](#)

By inhibiting dihydroorotate dehydrogenase, leflunomide blocks the synthesis of pyrimidine nucleic acids, thereby reducing the cell's ability to synthesize DNA. This inhibits the ability of cells to replicate, specifically T lymphocytes in the case of leflunomide.

Adverse Effects

Hepatotoxicity

[Liver with Toxic-green-glow](#)

Severe liver injury has been reported in some patients treated with leflunomide, and it is therefore contraindicated in patients with severe hepatic impairment. Even in patients not known to have liver disease, liver enzymes should be monitored in patients started on leflunomide.

Bone Marrow Suppression

Bone Arrow Suppressed

Given the mechanism of action of leflunomide includes suppression of the proliferation of T lymphocytes, one of the adverse side effects is suppression of other cell lines. Patients taking leflunomide have been reported to experience any combination of suppression, leading to anemia, thrombocytopenia, agranulocytosis or pancytopenia.

GI Upset

Upset GI Guy

Symptoms of GI upset such as diarrhea and nausea/vomiting are the most commonly reported side effects in patients taking leflunomide, having been reported in approximately 13-27% of patients.

Alopecia

Aloe-plant on-head

Alpecia, or hair loss, is one of the most commonly reported side effects in patients taking leflunomide, and is reported in 9-17% of patients.