

# Apremilast (Otezla)

Apremilast (brand name *Otezla*) is an oral phosphodiesterase-4 (PDE4) inhibitor approved for the treatment of moderate to severe plaque psoriasis and psoriatic arthritis. The enzyme PDE4 regulates the levels of cyclic adenosine monophosphate (cAMP), which is critical for modulating immune cell responses. By inhibiting PDE4, apremilast increases cAMP levels, which in turn helps restore the balance between pro-inflammatory and anti-inflammatory mediators in immune cells, including key cytokines like interleukin-17 (IL-17) and tumor necrosis factor-alpha (TNF- $\alpha$ ), both of which are involved in inflammatory skin and joint conditions such as psoriasis and psoriatic arthritis.

Initially approved by the FDA on March 21, 2004, for the treatment of psoriatic arthritis, apremilast was the first oral medication in the United States approved for this indication. The typical starting dose for psoriatic arthritis is 30 mg twice daily, which is gradually titrated to minimize gastrointestinal side effects. In patients with severe renal impairment, the dose should be reduced to 30 mg once daily. Apremilast is especially advantageous for patients with multiple comorbidities due to its favorable safety profile, as it does not require routine laboratory monitoring, unlike other systemic therapies such as disease-modifying antirheumatic drugs or certain biologics.

## **Safety Profile and Common Side Effects**

Although apremilast is generally well tolerated, there are several adverse events that patients may experience. The most common side effects include mild gastrointestinal symptoms such as diarrhea, nausea, and vomiting, which are typically transient and resolve with continued therapy. In clinical trials, diarrhea was the most frequently reported side effect, affecting around 10-20% of patients, though it generally improved over time. Additionally, some patients have reported unexplained weight loss, which may be significant enough to require discontinuation of the medication. Regular monitoring of weight is recommended during therapy to detect any substantial, otherwise unexplained weight reduction.

Other side effects include headache and upper respiratory infections, both of which are typically mild and self-limited. Depression and suicidal ideation have also been reported, though the incidence of these psychiatric side effects is relatively low. Nevertheless, screening for depression and careful monitoring during treatment are recommended, especially in patients with a history of depression or suicidal thoughts. Furthermore, some patients may experience insomnia and mood changes, which are more rare but still warrant close observation.

## Contraindications and Considerations

In addition to monitoring for psychiatric symptoms, apremilast is contraindicated in patients with severe renal impairment, as the medication is primarily eliminated via the kidneys. Dose adjustments are necessary in these patients to avoid further complications. Apremilast should be used with caution in patients with a history of gastrointestinal disorders, particularly those prone to inflammatory bowel disease, as gastrointestinal side effects may exacerbate such conditions.

## Conclusion

Apremilast offers a valuable option for the treatment of psoriasis and psoriatic arthritis, particularly in patients seeking an oral medication with a relatively favorable side effect profile compared to biologic treatments. However, monitoring for gastrointestinal symptoms, weight changes, and psychiatric symptoms is important to ensure optimal outcomes. As with all treatments, healthcare providers should conduct a thorough risk-benefit evaluation before starting apremilast, particularly for patients with underlying psychiatric conditions or renal impairments.

## References

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