# Can the Meniscus Heal Without Surgery? A Systematic Review of Clinical Outcomes Following PRP, Corticosteroid, and Other Injective Therapies for Degenerative and Traumatic Meniscal Lesions


## Abstract

**Background:** Meniscal tears, both degenerative and traumatic, are common sources of knee pain and disability. While arthroscopic partial meniscectomy has historically been the standard of care, increasing concern regarding its long-term consequences has shifted interest toward joint-preserving, minimally invasive options. Injective therapies, including platelet-rich plasma (PRP), corticosteroids, hyaluronic acid (HA) and other biological and non biological products have been proposed as potential nonoperative treatments, yet their clinical value remains unclear.

**Purpose:** To systematically review the clinical outcomes, imaging findings, and surgical conversion rates following injective therapies used as standalone treatments for meniscal pathology.

**Methods:** Following PROSPERO registration (CRD420251233155), a comprehensive search of PubMed, Embase, and Cochrane databases was performed (August 29, 2025). Inclusion criteria encompassed English-language clinical studies (2010–2025) reporting outcomes of injective treatments for meniscal tears or degeneration. Data extraction and quality assessment were performed independently. Methodological quality was assessed using the modified Coleman Methodology Score (mCMS) and, for randomized controlled trials (RCTs), the Cochrane RoB 2 tool.

**Results:** Of 1,235 records screened, 24 studies met inclusion criteria, comprising 2,027 patients. Thirteen studies investigated PRP, seven steroids, and four alternative injectives (HA, polynucleotides, microfragmented adipose tissue, ACS). Overall methodological quality was modest (mean mCMS 46/100). PRP consistently improved pain and function, with some studies reporting MRI evidence of partial healing and surgery-free survival above 80% at mid-term follow-up. Steroid injections provided short-term relief but lacked structural benefit. HA, polynucleotides, adipose-derived products, and ACS demonstrated encouraging early outcomes but were supported by limited evidence. Across therapies, adverse events were rare, and surgical conversion rates were low.

**Conclusion:** Injective therapies may offer meaningful symptom relief and, in selected cases, signs of biological healing in patients with degenerative or traumatic meniscal lesions. PRP demonstrates the most consistent clinical benefit, whereas other injectives show promise but require further investigation. Current evidence remains limited by low study quality and substantial heterogeneity. High-quality randomized trials with standardized protocols are needed to define the true role of injective therapies in the nonoperative management of meniscal pathology.