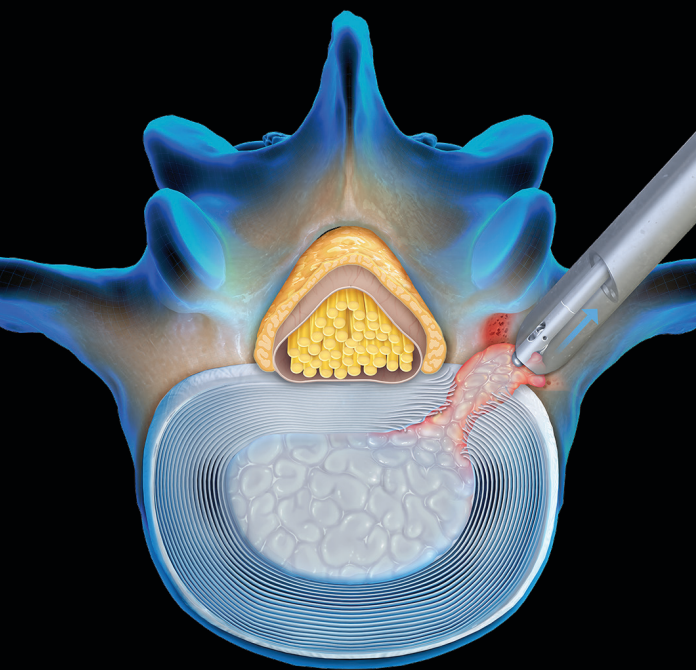


Discectomy + PRP

Platelet-Rich Plasma for Endoscopic Lumbar Discectomy

Scientific Insights



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Clinical Relevance

Lumbar disc herniation is a leading cause of radiculopathy and lower back pain, affecting millions of people worldwide.¹ While endoscopic discectomy offers minimally invasive decompression, key challenges remain:

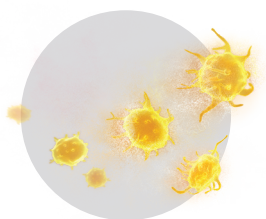
- **Residual annular defect**—up to 20% risk of reherniation and reoperation²
- **Accelerated disc degeneration** postdiscectomy³
- **Incomplete pain relief and functional recovery** in some patients⁴

Platelet-rich plasma (PRP) delivers concentrated growth factors and cytokines. Clinical studies⁵⁻¹⁰ suggest PRP may support annular healing and disc remodeling, while also contributing to **improvements in inflammation, pain, recurrence rates, and disc height**.

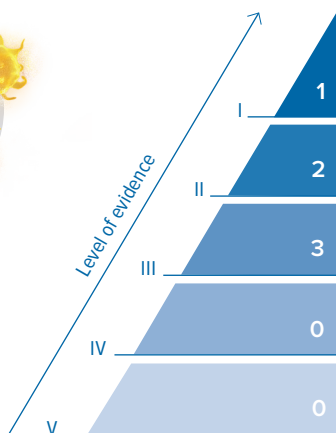
Biologic Adjuncts

Evidence Summary

Six clinical studies⁵⁻¹⁰ evaluated PRP augmentation during or after endoscopic discectomy. PRP was associated with improvements in pain, function, and recurrence rates, regardless of whether it was applied during discectomy alone or with an annulus repair.

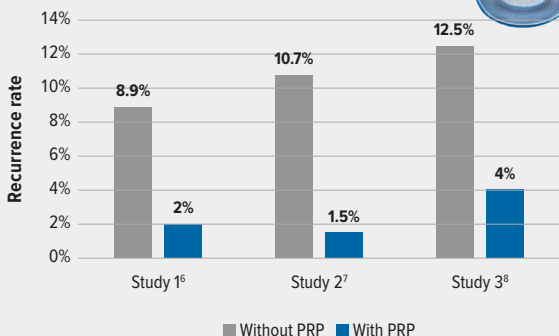


Platelet-Rich Plasma (PRP)
Concentrated autologous
growth factors



Number of published studies on endoscopic discectomy plus PRP used in this review

Recurrence rates reported across three clinical studies



Outcomes reported in individual studies; study designs and endpoints vary.



Pain (VAS): Significant improvement in PRP groups at 3, 6, and 12 months¹⁰



Function (ODI, JOA): Better scores in PRP groups across all time points⁷



Disc: Reduced disc protrusion, and significantly improved disc height and canal cross-sectional area in PRP groups⁶

Key Takeaways

- › PRP combined with endoscopic discectomy can improve pain and functional outcomes⁷
- › Adjunct PRP may reduce recurrence risk compared to discectomy alone⁶
- › PRP has been shown to support disc integrity and slow degeneration⁵⁻¹⁰

Study Limitations

- › Limited high-level evidence
- › Variability in PRP protocols
- › No long-term (>2 years) data

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Note: Different PRP devices from several manufacturers were used in the studies.

Literature Search: PubMed, Google Scholar, and Embase (October 2025)

Search Terms: “disc herniation” AND “endoscopic discectomy” AND “PRP”

Study Selection: Only studies reporting positive outcomes associated with PRP were included to highlight its potential therapeutic value based on currently available clinical evidence.



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