

## References

[1] [Morphological and Quantitative Parametric MRI Follow-up of Cartilage Changes Before and After Intra-articular Injection Therapy in Patients With Mild to Moderate Knee Osteoarthritis](#)  
Marcel Tschopp, ..., and A. Rosskopf. *Investigative Radiology*, 2024. 7 citations.  
100% Topic Match  
Demonstrates a randomized, double blinded, placebo controlled MRI study of IA injections in knee OA.  
Compares intra articular glucocorticoid, hyaluronic acid, PRP, and placebo with quantitative T2/T2 mapping and morphological MRI at baseline, 3 and 12 months.  
Relevant: adult mild–moderate knee OA (KL 1–3); reports structural (cartilage T2/T2, Outerbridge, BMLs, cysts, osteophytes) outcomes; clinical and safety outcomes not specified in abstract—check full text for pain/function/safety data.

[2] [A Randomized Trial of Intra-articular Injection Therapy for Knee Osteoarthritis](#)  
M. Tschopp, ..., and A. Rosskopf. *Investigative Radiology*, 2022. 38 citations.  
100% Topic Match  
Compares clinical outcomes of IA glucocorticoid, hyaluronic acid, PRP, and placebo in knee OA.  
Conducts a double blind, placebo controlled RCT (n=120 knees, KL grade 1–3) with pain (NRS) over 6 months plus WOMAC, activity, mobility, and adverse events.  
Relevant: adult knee OA RCT (2022), includes placebo arm and reports clinical and safety outcomes; structural outcomes not mentioned in abstract.

[3] [Effect of Intra-articular Platelet-Rich Plasma vs Placebo Injection on Pain and Medial Tibial Cartilage Volume in Patients With Knee Osteoarthritis: The RESTORE Randomized Clinical Trial](#)  
K. Bennell, ..., and David J. Hunter. *JAMA*, 2021. 312 citations.  
100% Topic Match  
Demonstrates a randomized, placebo controlled trial of intra articular PRP for knee OA.  
Compares 3 weekly leukocyte poor PRP injections versus saline placebo in 288 adults (KL 2–3), double blinded, 12 month follow up.  
Relevant: knee specific RCT (2021), reports clinical (pain) and structural (medial tibial cartilage volume) outcomes and safety; PRP preparation specified (commercial leukocyte poor).

[4] [Intra-articular injection with platelet-rich plasma compared to triamcinolone hexacetonide or saline solution in knee osteoarthritis: A double blinded randomized controlled trial with one year follow-up](#)  
José Carlos Nunes-Tamashiro, ..., and R. N. V. Furtado. *Clinical Rehabilitation*, 2022. 28 citations.  
100% Topic Match  
Compares intra articular PRP versus triamcinolone hexacetonide and saline in knee OA (double blind RCT).  
Randomized 100 patients with KL II–III OA, blinded patients/assessor, assessed pain, function, QoL at 4,8,12,52 weeks; baseline and 52 week radiographs.  
Relevant: includes placebo (saline) and active CS comparator, reports clinical outcomes over 1 year; radiographic outcomes limited to baseline vs 52 weeks.

[5] [MRI Findings after Injection of Single and Double Centrifuged Platelet-Rich Plasma and Placebo \(Normal Saline\) in Patients with Knee Osteoarthritis: A Randomized Double-Blind Clinical Trial with Six-Month Follow-Up](#)  
M. Ghadamzadeh, ..., and Paniz Jahani. *Archives of Bone and Joint Surgery*, 2025. 1 citations.  
100% Topic Match  
Demonstrates a randomized, double blind trial comparing single and double centrifuged PRP versus saline placebo in knee OA.  
Enrolled 63 patients with KL grade 2–3 OA, randomized to single PRP, double PRP, or normal saline; assessed MRI, VAS, WOMAC, ROM, and function at baseline and 6 months.  
Relevant: direct IA PRP vs placebo RCT (2025), reports clinical and MRI structural outcomes at 6 months; sample size modest, MRI endpoints limited to selected cartilage sites and WORMS components.

[6] [Effectiveness of Platelet Rich Plasma for the Management of Knee Osteoarthritis](#)  
A. Qamar, ..., and S. Danish. *Pakistan Journal of Medical and Health Sciences*, 2021. 11 citations.  
100% Topic Match  
Demonstrates a randomized, double blind, placebo controlled trial of intra articular PRP.  
Randomized 50 participants (100 knees) to 3 weekly IA injections of 5 mL autologous PRP versus 5 mL saline; pain measured by VAS.  
Relevant as a 2019–2021 trial of PRP vs saline in adult knee OA, but provided excerpt reports only short term VAS results (1 month); no structural or safety data shown here.

[7] [Efficacy of Platelet-Rich Plasma and Plasma for Symptomatic Treatment of Knee Osteoarthritis: A Double-Blinded Placebo-Controlled Randomized Clinical Trial](#)  
M. Dório, ..., and R. Fuller. *Unknown journal*, 2021. 21 citations.  
100% Topic Match  
Demonstrates a double-blind, randomized, placebo-controlled trial of intra articular PRP and plasma for knee OA.  
Compares 2 ultrasound guided IA injections (PRP vs plasma vs saline) with primary outcome VAS pain at 24 weeks, plus KOOS, OMERACT OARSI, TUGT.  
Relevant: adult KOA RCT (n=62) 2021, placebo (saline) comparator, reports clinical outcomes to 24 weeks; small sample, mostly female, no structural or long term safety/TKA data mentioned.

[8] [A within-person, between-knee comparison of intra-articular platelet-rich plasma versus placebo injection in knees osteoarthritis: a randomized, double-blind comparison](#)  
A. Sadeghi, ..., and A. Ammari. *Unknown journal*, 2021. 1 citations.  
100% Topic Match  
Demonstrates a within person randomized, double blind comparison of IA PRP versus placebo.  
Enrolled 30 patients with bilateral knees matched radiographically; one knee received single PRP injection, contralateral knee received saline; outcomes at baseline and 6 weeks (WOMAC subscales, VAS).  
Relevant: adult knee OA RCT (2021), placebo controlled and double blind, reports clinical outcomes and short term safety implicitly; small sample, single injection, short 6 week follow up, and inter knee comparisons showed within knee improvements with PRP but no significant between knee differences on WOMAC.

[9] [Comparison of intra-articular platelet-rich plasma injection versus placebo for clinical outcomes in patients with knee osteoarthritis: a double-blind, randomized trial](#)  
Hamid Reza Beiki, ..., and J. Moghimi. *Journal of Preventive Epidemiology*, 2024. 2 citations.  
100% Topic Match  
Demonstrates a double blind, randomized within subject trial of intra articular PRP versus sham.  
Randomized each knee of 34 patients (KL grade 2–3) to 3 mL PRP injection or needling only; outcomes at 3 and 6 months (WOMAC, IKDC, EQ VAS, TAS).  
Relevant: 2024 RCT vs sham/placebo, adult knee OA, reports clinical outcomes (pain/function); no structural or safety outcomes reported in provided excerpt.

[10] [MRI Changes After Platelet Rich Plasma Injection in Knee Osteoarthritis \(Randomized Clinical Trial\)](#)  
S. A. Raeissadat, ..., and S. Payami. *Journal of Pain Research*, 2020. 67 citations.  
100% Topic Match  
Demonstrates a randomized, within patient trial of intra articular PRP versus control in knee OA.  
Compares two PRP injections (4 week interval) to contralateral control knees in 23 patients, assessing VAS, WOMAC, and MRI cartilage features at baseline and 8 months.

Relevant: adult knee OA (KL grades 1–3), double blind, MRI structural outcomes reported; small sample (46 knees, all female), control details unclear (presumably saline/sham), limits generalizability.

[11] [Efficacy and safety of corticosteroids, hyaluronic acid, and PRP and combination therapy for knee osteoarthritis: a systematic review and network meta-analysis](#)

Xiaochen Qiao, ..., and Zhi Tian. *BMC Musculoskeletal Disorders*, 2023. 48 citations.

100% Topic Match

Demonstrates a 2023 systematic review and Bayesian network meta analysis of IA CS, HA, PRP (and combos) for knee OA.

Searches multiple databases to Dec 2022, includes 35 randomized trials (n=3,104), extracts VAS, WOMAC, and adverse events; uses Bayesian random effects NMA. Relevant: focuses on knee OA RCTs vs various comparators (includes placebo arms), reports clinical outcomes and safety but limited to trials dDec 2022; check heterogeneity, PRP/HA product details, and risk of bias assessments for applicability.

[12] [A comparative study of the efficacy of intra-articular injection of different drugs in the treatment of mild to moderate knee osteoarthritis: A network meta-analysis](#)

Yuan Xue, ..., and Y. Xue. *Medicine*, 2023. 16 citations.

100% Topic Match

Conducts a network meta-analysis comparing intra articular agents for mild–moderate knee OA.

Pooled randomized trials through Dec 20, 2021 across seven databases, using VAS and WOMAC change as primary outcomes.

Relevant as an evidence synthesis (2023) including IA agents, but cutoff 2021 means it excludes 2022–2026 trials; check whether analyses separate HA, PRP, and corticosteroids and whether comparisons include placebo/sham or standard care arms.

[13] [Efficacy of ultrasound-guided intra-articular injection in the treatment of knee osteoarthritis in early and middle stages: a network meta-analysis](#)

Jiahao Zhang, ..., and Jiacheng Li. *Frontiers in Medicine*, 2025. 0 citations.

100% Topic Match

Demonstrates a Bayesian network meta-analysis comparing ultrasound guided intra articular injections for knee OA.

Pools 14 RCTs (934 patients) of US guided PRP, HA, corticosteroids, ozone, dexamethasone, autologous adipose tissue, and placebo; primary outcomes VAS and WOMAC.

Relevant as an evidence synthesis (2025) including placebo-controlled US guided IA arms; check whether knee only RCTs, PRP/HA/CS trial counts, structural and safety outcomes, and risk of bias details are reported.

[14] [Long-term effectiveness of intra-articular injectables in patients with knee osteoarthritis: a systematic review and Bayesian network meta-analysis](#)

Nikhil Gupta, ..., and K. Bansal. *Journal of Orthopaedic Surgery and Research*, 2025. 1 citations.

100% Topic Match

Performs a Bayesian network meta-analysis of long term IA injectables for knee OA.

Pools 37 RCTs (n=5,089) with e1 year follow up to compare PRP, HA, CS, and combinations on pain and function.

Relevant: RCTs only, knee OA-specific, mid/long term outcomes (e12 months); unclear if structural or safety outcomes were included.

[15] [Platelet-Rich Plasma, Bone Marrow Aspirate and Hyaluronic Acid Lead to Significant Improvement at 6 months Compared to Placebo: A Network Metaanalysis of Injections for Knee Osteoarthritis](#)

E. Mameri, ..., and Jorge Chahla. *Orthopaedic Journal of Sports Medicine*, 2024. 0 citations.

100% Topic Match

Compares efficacy of IA PRP, HA, CS, and BMAC versus placebo via network meta analysis.

Pooled 47 RCTs (level I-II) with e6 month follow up, using arm based Bayesian random effects NMA on 0–100 pain/function scores.

Relevant as a 2024 evidence synthesis including knee OA RCTs versus placebo; check whether knee only trials, handling of heterogeneous PRP/HA products, and structural/safety outcomes were reported (paper focuses on pain/function).

[16] [Relative Efficacy of Intra-articular Injections in the Treatment of Knee Osteoarthritis: A Systematic Review and Network Meta-analysis](#)

Harshvivek Singh, ..., and J. Chahla. *The American Journal of Sports Medicine*, 2021. 80 citations.

100% Topic Match

Compares efficacy of IA HA, CS, PRP, and PRGF for knee OA via network meta analysis.

Conducts a PRISMA systematic review and network meta analysis of RCTs, extracting 6 month pain/function outcomes (converted to 0–100 scales).

Relevant as a 2021 evidence synthesis including HA, PRP, and corticosteroids versus comparators, but check whether analyses separate placebo/sham or standard care comparators and structural/safety outcomes (abstract reports clinical pain/function at 6 months only).

[17] [Comparative effectiveness of intra-articular therapies in knee osteoarthritis: a meta-analysis comparing platelet-rich plasma \(PRP\) with other treatment modalities](#)

Saad Khalid, ..., and Pratik Bhattarai. *Annals of Medicine and Surgery*, 2023. 15 citations.

100% Topic Match

Compares PRP vs other IA therapies in knee OA via meta-analysis.

Pools 42 RCTs (search to Mar 2023) extracting WOMAC, VAS, KOOS, IKDC at 1–12 months, with subgroup, heterogeneity, and bias assessments.

Relevant as a 2020–2023 evidence synthesis including trials vs placebo/CS/HA, but check if knee-only data were separable and whether PRP/HA/CS arms versus placebo/standard care were reported separately.

[18] [PRP Injections for the Treatment of Knee Osteoarthritis: A Meta-Analysis of Randomized Controlled Trials](#)

G. Filardo, ..., and A. Grassi. *Cartilage*, 2020. 226 citations.

100% Topic Match

Demonstrates a systematic review and meta analysis of RCTs comparing intra articular PRP for knee OA versus placebo/sham and other injectables.

Achieves this by pooling 34 randomized trials (1403 PRP knees, 1426 controls) through a PROSPERO registered search to Jan 17, 2020, using Cochrane risk of bias and GRADE.

Relevant: reports clinically and statistically greater pain/function benefit for PRP vs placebo at 12 months and vs HA/CS at 6–12 months; structural and safety outcomes not clearly reported in the abstract.

[19] [How Does Platelet-Rich Plasma Compare Clinically to Other Therapies in the Treatment of Knee Osteoarthritis? A Systematic Review and Meta-analysis](#)

L. A. Costa, ..., and M. Ferretti. *The American Journal of Sports Medicine*, 2022. 54 citations.

100% Topic Match

Presents a systematic review and meta-analysis comparing intra articular PRP to other nonsurgical therapies for knee OA.

Pools 40 randomized/quasi randomized trials (n=3035) up to Jan 2021, comparing PRP vs HA, corticosteroid, and saline; assessed risk of bias (Cochrane) and GRADE.

Relevant as an evidence synthesis (2022) covering PRP vs placebo/sham (saline) and standard comparators; check included trials' dates (d2020), PRP preparation heterogeneity, outcomes (pain, function, treatment failure), and GRADE risk of bias details for applicability to 2020–2026 review.

[20] [PRP Injections for the Treatment of Knee Osteoarthritis: The Improvement Is Clinically Significant and Influenced by Platelet Concentration: A Meta-analysis of Randomized Controlled Trials](#)

Alessandro Bensa, ..., and G. Filardo. The American Journal of Sports Medicine, 2025. 33 citations.

100% Topic Match

Analyzes PRP versus placebo RCTs for knee OA focusing on clinical significance (MCID) and platelet concentration effects.

Performs a PRISMA-guided meta-analysis of randomized placebo-controlled trials across five databases, pooling VAS and WOMAC at 1, 3, 6, and 12 months, with platelet-concentration subgroup analyses.

Relevant: 2025 evidence synthesis limited to placebo-controlled RCTs (meets primary criteria); reports clinical outcomes and concentration moderators but unclear if structural or safety outcomes were included—check full text for structural endpoints, safety reporting, trial selection, and platelet preparation definitions.

[21] [Efficacy and Safety of Intra-Articular Platelet-Rich Plasma in Osteoarthritis Knee: A Systematic Review and Meta-Analysis](#)

Mao Hong, ..., and Wanshou Guo. BioMed Research International, 2021. 43 citations.

100% Topic Match

Analyzes the efficacy and safety of intra articular PRP for knee osteoarthritis.

Conducts a 2021 systematic review and meta analysis (search to Dec 2019) of 23 RCTs comparing IA PRP with placebo or conservative comparators (NSAIDs, HA, CS); primary outcomes VAS, WOMAC, IKDC; adverse events reported.

Relevant to your criteria: includes RCTs vs placebo/sham and standard care, finds PRP superior on several clinical outcomes at ~6 months with no higher adverse event rate; cutoff Dec 2019—trials 2020–2026 are not covered.

[22] [Effectiveness of Platelet-Rich Plasma in the Treatment of Knee Osteoarthritis: A Meta-analysis of Randomized Controlled Clinical Trials](#)

Liu-yan Nie, ..., and Jing Xue. Orthopaedic Journal of Sports Medicine, 2021. 69 citations.

99% Topic Match

Synthesizes RCT evidence on intra articular PRP for knee osteoarthritis.

Performs a systematic review and random effects meta analysis of 21 RCTs (search to Mar 2019) comparing PRP versus saline, corticosteroid, and HA.

Relevant as a 2021 evidence synthesis showing clinically important pain/function benefits of PRP vs saline and vs steroid, inconclusive PRP vs HA; heterogeneity in PRP preparations noted and structural/safety outcomes not clearly reported.

[23] [Evaluating the Effectiveness of Intra-articular Platelet Rich Plasma Injections for the Treatment of Knee Osteoarthritis: A Systematic Review](#)

Thomas Joanna, ..., and Athanasiou Anastasia. SVOA Orthopaedics, 2023. 0 citations.

99% Topic Match

Demonstrates a systematic review of intra articular PRP versus placebo for knee OA.

Pools 12 RCTs (PubMed/Cochrane/CINAHL search, two reviewers, PRISMA/Covidence) reporting 6 month WOMAC stiffness, VAS, KOOS improvements favoring PRP.

Relevant limitations: substantial heterogeneity in PRP prep and patients, no structural imaging or TKA outcomes reported, safety outcomes not summarized, and focus is PRP vs saline only.

[24] [Platelet-Rich Plasma Therapy: An Effective Approach for Managing Knee Osteoarthritis](#)

Jack L Crowley and V. Soti. Cureus, 2023. 17 citations.

99% Topic Match

Summarizes recent clinical trial evidence on intra articular PRP for knee osteoarthritis.

Systematic review (PRISMA; searched PubMed/Embase/Orthogate/ClinicalTrials.gov to July 2023) of clinical trials in prior five years, extracting clinical (VAS/WOMAC/function) and some MRI structural outcomes.

Relevant: includes randomized PRP vs saline trials (e.g., Bennell 2021, Dório 2021), highlights heterogeneity in PRP preparation/dosing and platelet concentrations, reports no clear MRI cartilage benefit and no pooled meta analysis.

[25] [The Effectiveness of Platelet-Rich Plasma in Reducing Pain and Improving Functional Outcomes for Patients with Knee Osteoarthritis: A Systematic Review](#)

Millsep Sieroka and Sherrina Oktaviani Gosandra. The International Journal of Medical Science and Health Research, 2025. 0 citations.

99% Topic Match

Synthesizes RCT evidence on intra articular PRP for knee osteoarthritis.

Conducts a PRISMA guided systematic review of RCTs comparing PRP versus saline, HA, or corticosteroids, extracting WOMAC, VAS and other functional outcomes.

Relevance notes: published 2025 (within 2020–2026); appears focused on knee specific RCTs versus placebo/active comparators, but check included trials list, risk of bias assessment, PRP preparation heterogeneity, and whether structural or safety outcomes were fully reported.

[26] [Complications of Platelet Rich Plasma Injection for Knee Osteoarthritis are Similar to Corticosteroids and Hyaluronic Acid, but are Significantly Greater than Placebo Injections: A Meta-Analysis of Randomized Controlled Trials](#)

Stephen P. Fucaloro, ..., and Matthew J. Salzler. Arthroscopy : the journal of arthroscopic & related surgery : official publication of the Arthroscopy Association of North America and the International Arthroscopy Association, 2025. 1 citations.

98% Topic Match

No summary or abstract available

[27] [POS1099 EFFICACY OF INTRA-ARTICULAR CORTICOSTEROID INJECTIONS IN KNEE OSTEOARTHRITIS: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS](#)

A. Najm, ..., and F. Berenbaum. Annals of the Rheumatic Diseases, 2021. 0 citations.

98% Topic Match

Demonstrates a systematic review and meta analysis of IA corticosteroid injections for knee OA.

Pooled 14 RCTs (from 23 SLR included studies) comparing IA GC versus HA, saline/placebo, IA/oral NSAID, or physiotherapy; reported SMDs by short (<6w), medium (6–24w), long (>24w) follow up.

Relevant: conference abstract (2021) with limited detail; short term pain/function favored GC (SMDs ~ 0.61 and 1.02, CIs wide), no medium term benefit, long term favored comparators (heterogeneous, driven by single large trials); safety reported in 18 studies with some cartilage loss signal in one trial.

[28] [Role of platelet-rich plasma in the treatment of osteoarthritis: a meta-analysis](#)

Haijiang Ren, ..., and Wenlai Guo. The Journal of International Medical Research, 2020. 16 citations.

97% Topic Match

Analyzes the clinical efficacy of intra articular PRP for knee osteoarthritis.

Performs a 2020 meta analysis (5 RCTs, 320 patients) using PubMed/Embase/Cochrane search and RevMan pooling.

Relevant: mostly symptom outcomes with mixed results (some VAS/WOMAC improvements and higher satisfaction); only two RCTs used saline placebo (others HA), no structural or detailed safety data reported, and PRP preparation details are not described.

[29] [Safety profile comparison of intra-articular corticosteroids, hyaluronic acid, platelet-rich plasma, and cell-based injections for knee osteoarthritis: A systematic review and meta-analysis by the ESSKA Orthobiologics Initiative](#)

Alessandro Bensa, ..., and Giuseppe Filardo. Knee surgery, sports traumatology, arthroscopy : official journal of the ESSKA, 2025. 0 citations.

96% Topic Match

Compares safety profiles of IA corticosteroids, hyaluronic acid, PRP, and cell based injections.

Conducts a PRISMA systematic review and meta analysis of adverse events from clinical studies (559 studies, 76,061 patients).

Relevant as an evidence synthesis (2025) focused on safety outcomes; check whether analyses stratify randomized placebo/sham controlled trials and report clinical/structural outcomes (this paper centers on adverse events).

[30] [Corticosteroid injections for knee osteoarthritis offer clinical benefits similar to hyaluronic acid and lower than platelet-rich plasma: a systematic review and meta-analysis](#)

Alessandro Bensa, ..., and G. Filardo. EFORT Open Reviews, 2024. 10 citations.

95% Topic Match

Compares clinical effectiveness of intra articular corticosteroids versus hyaluronic acid and PRP in knee OA via systematic review/meta analysis.

Pools 35 RCTs (n=3348) per PRISMA, assessed RoB 2 and GRADE; compares WOMAC, VAS up to 12 months and evaluates MCID.

Relevant as a 2024 evidence synthesis of RCTs, but it appears to be head to head CS vs HA/PRP (not necessarily versus placebo/sham or standard care); check included trials for placebo arms, structural or safety outcomes reporting, and heterogeneity of HA/PRP preparations.

[31] [Meta Analysis on Outcomes of Intra Articular Knee Injections: Hyaluronic Acid and Corticosteroid for Knee Osteoarthritis](#)

Adnan Haider, ..., and Yazdan Bin Kamran<sup>3</sup>. Journal of Health, Wellness and Community Research, 2025. 0 citations.

93% Topic Match

Demonstrates a systematic review and meta-analysis comparing IA hyaluronic acid vs corticosteroids for knee OA.

Conducts PRISMA aligned search (2013–2025), pools 18 RCTs using random effects SMDs for pain (VAS) and function (WOMAC) across short and long term intervals.

Relevant as an evidence synthesis (2025) of RCTs; however it compares HA vs CS (not placebo/sham/standard care arms explicitly), so check included trials for placebo-controlled arms and for reporting of structural and safety outcomes.

[32] [Platelet Rich Plasma, Bone Marrow Aspirate Concentrate and Hyaluronic Acid Injections Outperform Corticosteroids in Pain and Function Scores at a Minimum of 6 Months as Intra-Articular Injections for Knee Osteoarthritis: A Systematic Review and Network Meta-Analysis](#)

Harry Jawanda, ..., and J. Chahla. Arthroscopy : the journal of arthroscopic & related surgery : official publication of the Arthroscopy Association of North America and the International Arthroscopy Association, 2024. 21 citations.

92% Topic Match

No summary or abstract available

[33] [The comparison effects of intra-articular injection of Platelet Rich Plasma \(PRP\), Plasma Rich in Growth Factor \(PRGF\), Hyaluronic Acid \(HA\), and ozone in knee osteoarthritis: a one year randomized clinical trial](#)

S. A. Raeissadat, ..., and M. Darvish. BMC Musculoskeletal Disorders, 2021. 126 citations.

91% Topic Match

Compares clinical effects of IA PRP, PRGF, HA, and ozone in knee OA.

Randomized 238 patients (200 analyzed) with mild–moderate knee OA into four active IA arms; measured VAS, WOMAC, Lequesne at 2, 6, 12 months.

Relevant but somewhat related only: head to head trial with no placebo/sham or standard care control reported; no structural outcomes or safety data provided in excerpt.

[34] [Intra-articular platelet-rich plasma vs. corticosteroid injections efficacy in knee osteoarthritis treatment: a systematic review](#)

F. A. Idres and M. Samaan. Annals of Medicine and Surgery, 2023. 7 citations.

88% Topic Match

Compares intra articular PRP versus corticosteroid injections for knee OA (systematic review).

Synthesizes nine randomized controlled trials identified from PubMed and CENTRAL, extracting WOMAC/KOOS/VAS outcomes for early–mid follow up.

Relevance notes: 2023 evidence synthesis of RCTs is directly relevant, but scope excludes HA and placebo only arms; check included trials for comparator types (some may be head to head PRP vs CS rather than vs placebo/sham/standard care) and for reporting of structural/safety outcomes.

[35] [Intra-articular platelet-rich plasma injections versus intra-articular corticosteroid injections for symptomatic management of knee osteoarthritis: systematic review and meta-analysis](#)

M. McLarnon and N. Heron. BMC Musculoskeletal Disorders, 2021. 73 citations.

86% Topic Match

Compares intra articular PRP versus intra articular corticosteroid injections for knee OA.

Performs a systematic review and random effects meta analysis of 8 RCTs (n=648), searches to June 2020, Cochrane RoB (overall low).

Relevant for clinical efficacy (WOMAC/VAS): PRP superior to CS at 3–9 months (largest SMDs at 6–9 months); structural and safety outcomes not reported in provided summary.

[36] [P074 Intra-articular platelet-rich plasma injections versus intra-articular corticosteroid injections for the symptomatic management of knee osteoarthritis: a systematic review and meta-analysis](#)

M. McLarnon and N. Heron. Rheumatology, 2023. 0 citations.

82% Topic Match

Compares intra articular PRP versus corticosteroid injections for knee OA (systematic review/meta analysis).

Pools RCTs and controlled trials through June 2020 using random effects SMDs for WOMAC, VAS, KOOS; risk of bias assessed with Cochrane tool.

Relevant but somewhat limited: comparator is CS (not placebo/sham or standard care); search cutoff June 2020 and published 2023, so it does not include 2020–2026 trials after June 2020.

[37] [A Comparative Study of Intra-Articular Knee Injection of Leukocyte-Poor Platelet-Rich Plasma Compared to Corticosteroids and Local Anesthetics in Patients with Knee Osteoarthritis](#)

Abbas Ahmadi, ..., and E. Espahbodi. Archives of Anesthesia and Critical Care, 2024. 0 citations.

82% Topic Match

Compares leukocyte poor PRP versus intra articular corticosteroid injections for knee OA.

Randomized controlled trial of 40 patients (2 groups of 20) receiving LP PRP (from 40 cc blood, two step centrifugation) or IA corticosteroid; reports clinical outcomes.

Relevance caveats: small sample, unclear blinding/randomization details and comparator is active (CS) not placebo/sham or standard care; adult knee OA population fits scope but lacks placebo arm and may be underpowered.

[38] [Effectiveness of intra-articular injection of platelet-rich plasma versus triamcinolone in osteoarthritis of knee – A hospital-based randomized clinical trial](#)

S. Saidapur, ..., and Satish Bachchu. IP International Journal of Orthopaedic Rheumatology, 2021. 1 citations.

78% Topic Match

Compares intra articular PRP versus triamcinolone in knee OA (randomized clinical trial).

Randomized 70 adults with KL grade 1–2 knee OA to PRP (5 mL) or triamcinolone (80 mg), two injections 3 weeks apart; assessed VAS, KOOS, WOMAC at 3w, 3m, 6m.

Relevant but somewhat limited for your criteria: head to head (PRP vs steroid), not versus placebo/sham or standard care; no structural or detailed safety outcomes reported in excerpts.

[39] [Intra-articular Infiltration of Platelet-Rich Plasma versus Hyaluronic Acid in Patients with Primary Knee Osteoarthritis: Preliminary Results from a Randomized Clinical Trial](#)

G. Arlian, ..., and Victor Otávio Oliveira. Revista Brasileira de Ortopedia, 2021. 10 citations.

76% Topic Match

Compares intra articular PRP versus HA for primary knee osteoarthritis.

Randomized trial of 29 patients assessing VAS pain and WOMAC function; adverse events recorded.

Small preliminary RCT (no placebo/sham or standard care arm), no structural outcomes reported, limited sample and follow up details.

[40] [Intraarticular leukocyte-poor platelet-rich plasma injection is more effective than intraarticular hyaluronic acid injection in the treatment of knee osteoarthritis: a systematic review and meta-analysis of 12 randomized controlled trials](#)

Yu-Ning Peng, ..., and Carl P. C. Chen. Knee Surgery & Related Research, 2025. 3 citations.

74% Topic Match

Compares clinical efficacy of leukocyte poor PRP versus hyaluronic acid for knee OA (systematic review and meta analysis of RCTs). Synthesizes 12 randomized trials (searched PubMed/Web of Science/Cochrane) using WOMAC, VAS, IKDC, EQ VAS and adverse events; finds LP PRP superior on WOMAC total/physical at 6 and 12 months and VAS at 3–12 months. Relevance note: this is a 2025 evidence synthesis but is a head to head PRP vs HA comparison (no placebo/sham or standard care comparator); only leukocyte poor PRP pooled—so it is somewhat related but does not address PRP/HA versus saline/sham or standard care.

[41] [Comparison of clinical efficiency between intra-articular injection of platelet-rich plasma and hyaluronic acid for osteoarthritis: a meta-analysis of randomized controlled trials](#)

Lili Chen, ..., and Jinshen He. *Therapeutic Advances in Musculoskeletal Disease*, 2023. 10 citations.

69% Topic Match

Compares efficacy of PRP versus HA for osteoarthritis via meta-analysis.

Pooled 30 RCTs (n=2733) from 4 databases to analyze WOMAC, VAS, IKDC, AEs, satisfaction, plus PRP subgroups.

Relevance caveats: includes OA broadly (not specified knee only here), is head to head PRP vs HA (no placebo/sham/standard care arms), and spans varying PRP/HA preparations and injection schedules.

[42] [Platelet-Rich Plasma Versus Hyaluronic Acid for Knee Osteoarthritis: A Systematic Review and Meta-analysis of Randomized Controlled Trials](#)

J. W. Belk, ..., and E. McCarty. *The American Journal of Sports Medicine*, 2020. 312 citations.

68% Topic Match

Compares PRP versus HA for knee OA via systematic review and meta-analysis.

Pools 18 randomized (level 1) trials (nH811 PRP patients), synthesizing WOMAC, VAS, and IKDC outcomes; subgrouped leukocyte poor vs rich PRP.

Relevant as an evidence synthesis (2020) of RCTs comparing PRP to HA (not placebo/sham); does not address PRP/HA versus saline/standard care controls.

[43] [Platelet rich plasma compared to viscosupplementation in the treatment of knee osteoarthritis: A systematic review and meta analysis of randomised controlled trials with 6 month and 12 month follow up](#)

Kian Bagheri, ..., and Amir A Jamali. *Journal of Experimental Orthopaedics*, 2025. 3 citations.

63% Topic Match

Compares PRP versus hyaluronic acid (HA) via systematic review and meta analysis of RCTs.

Pools randomized controlled trials to evaluate patient reported outcomes at 6 and 12 month follow up, and examines platelet concentration effects.

Relevance note: This is a 2025 evidence synthesis but is head to head (PRP vs HA) — it lacks placebo/sham or standard care comparator arms, so it is only somewhat related to the requested scope unless individual included trials contain placebo/standard care arms or report knee only data.

[44] [Efficacy and clinical outcomes of intra-articular injection of platelet-rich plasma versus hyaluronic acid for knee osteoarthritis](#)

Adel Azzam, ..., and Khaled Amer. *Al-Azhar International Medical Journal*, 2022. 1 citations.

60% Topic Match

Compares PRP versus hyaluronic acid for knee OA in a randomized trial.

Randomized 40 adults to three weekly intra articular injections (PRP n=20, HA n=20) and measured ROM, WOMAC, and VAS at baseline and 4 weeks after the third injection.

Relevant limitations: no placebo/sham or standard care control (head to head only), short follow up (only 4 weeks reported), no structural outcomes or safety/adverse event data presented.

[45] [Intra-Articular Injections of Platelet-Rich Plasma versus Hyaluronic Acid in Treatment of Knee Osteoarthritis \(Systematic Review and Meta-analysis\)](#)

Atef Mohamed Fathy Elbeltagy, ..., and M. Abdel-Samei. *QJM: An International Journal of Medicine*, 2021. 3 citations.

56% Topic Match

Compares PRP versus hyaluronic acid for knee osteoarthritis via systematic review and meta analysis.

Pools clinical trials to assess efficacy and safety, reporting greater PRP benefit on WOMAC pain/function/stiffness at 6–12 months.

Relevance caveats: head to head PRP vs HA (no placebo/sham/standard care comparator); published 2021; check included trial designs, risk of bias, PRP preparation heterogeneity, and whether knee only RCTs were isolated.

[46] [Comparison of hyaluronic acid and platelet-rich plasma in knee osteoarthritis: a systematic review](#)

Hong Xu, ..., and Zhuang Wei. *BMC Musculoskeletal Disorders*, 2025. 3 citations.

54% Topic Match

Compares clinical efficacy and safety of intra articular HA versus PRP in knee osteoarthritis.

Performs a systematic review and meta analysis of 42 randomized controlled trials pooling VAS, WOMAC, and safety outcomes using RevMan.

Relevance caveats: this is a head to head HA vs PRP synthesis (2025) — it does not compare either treatment against placebo/sham or standard care controls, and heterogeneity in PRP/HA preparations and risk of bias details will determine applicability.

[47] [Effectiveness of Different Types of Intraarticular Injections for the Knee Osteoarthritis: a Systemic Review](#)

M. El sayed, ..., and Androw Shenoda. *Benha Medical Journal*, 2022. 0 citations.

51% Topic Match

Reviews comparative trials of IA PRP, HA, and corticosteroid injections for knee OA.

Performs a systematic search (Jan 2010–Mar 2021) and includes 30 trials (nH3303) comparing PRP vs HA, HA vs CS, and combinations.

Relevance limits: published 2022 (search ends Mar 2021); includes randomized and nonrandomized trials, but many comparisons are head to head (few/no placebo/sham or standard care arms specified), and trial heterogeneity/quality not detailed.

[48] [Efficacy and safety of platelet-rich plasma injections for the treatment of osteoarthritis: a systematic review and meta-analysis of randomized controlled trials](#)

Yongqing Xiong, ..., and Wei Li. *Frontiers in Medicine*, 2023. 72 citations.

48% Topic Match

Analyzes the pooled efficacy and safety of PRP injections for osteoarthritis.

Conducts a PRISMA style meta analysis of 24 RCTs (n=1,344) searching major databases to March 2023.

Relevant but partially off scope: includes mixed joints (knee + hip/ankle/TMJ), focuses on PRP vs various comparators (including saline and CS); knee only, structural, and detailed safety outcome reporting not explicitly specified in the excerpt.

[49] [a comparison of intra-articular hyaluronic acid and platelet-rich plasma for knee osteoarthritis: a systematic review.](#)

Gian Ivander and Yovita Anggono. *Orthopedic reviews*, 2024. 8 citations.

48% Topic Match

Compares intra articular PRP versus HA for knee osteoarthritis.

Performs a PRISMA systematic review of prospective RCTs (2019–2022), selected 23 studies and highlighted four high quality pRCTs, using modified Jadad and RoB 2 assessments.

Relevant but limited: focuses on PRP vs HA head to head (not placebo/sham); reports clinical outcomes (VAS, WOMAC, EQ VAS, IKDC, Tegner) and risk of bias, but excerpts do not state inclusion of placebo/standard care arms or report structural or safety endpoints.

[50] [Efficacy and safety of intra-articular therapies in rheumatic and musculoskeletal diseases: an overview of systematic reviews](#)

S. Rodriguez-García, ..., and L. Carmona. *RMD Open*, 2021. 17 citations.

46% Topic Match

Summarizes evidence from systematic reviews on intra articular therapies for arthropathies.

Conducts an overview of SRs (search to July 2020), including RCTs, assessing pain, function, and adverse events; AMSTAR 2 used for quality.

Relevant: includes 18 SRs on knee OA (HA, CS, PRP discussed); search cutoff July 2020 (pre 2021 RCTs only) and full PRP conclusions not detailed here—useful as an evidence synthesis but not a 2020–2026 only update.

[51] [Platelet rich plasma injections for knee osteoarthritis: an overview of systematic reviews](#)

Lin Yi, ..., and Guanghui Zhang. *Frontiers in Physiology*, 2025. 3 citations.

43% Topic Match

Summarizes an overview of systematic reviews/meta-analyses on PRP for knee osteoarthritis.

Reviews 29 SRs/MAs (searches to Dec 1, 2024), assessing overlap (GROOVE), SR quality (AMSTAR 2), and primary trial risk (ROB 2.0).

Relevant as a 2025 evidence synthesis of PRP for adult knee OA vs controls, but notes very high primary study overlap and predominantly critically low SR quality.

[52] [Intra-Articular Injection of Platelet-Rich Plasma Is More Effective than Hyaluronic Acid or Steroid Injection in the Treatment of Mild to Moderate Knee Osteoarthritis: A Prospective, Randomized, Triple-Parallel Clinical Trial](#)

D. Szwedowski, ..., and S. Jeka. *Biomedicines*, 2022. 20 citations.

39% Topic Match

Demonstrates a randomized trial comparing PRP, HA, and corticosteroid injections for knee OA.

Randomized, single center, triple parallel trial (n=75; 25 per arm) with single intra articular leukocyte poor PRP vs HA vs glucocorticosteroid; WOMAC measured baseline, 6, 12, 26 weeks.

Relevant limitations: no placebo/sham or standard care control arm, single injection only, radiographic OA included (KLH2), structural outcomes not reported, incomplete reporting here of blinding, steroid type/dose, and safety details.

[53] [Systematic Review of Randomized Controlled Trials Evaluating the Use of Platelet-Rich Plasma for Knee Osteoarthritis: Adherence to Minimum Information for Studies Evaluating Biologics in Orthopaedics](#)

Hirotaka Nakagawa, ..., and Walter I. Sussman. *The American Journal of Sports Medicine*, 2025. 3 citations.

37% Topic Match

Assesses reporting quality of randomized trials of intra articular PRP for knee OA against MIBO standards.

Performs a PRISMA guided systematic review of RCTs of PRP for knee osteoarthritis, scoring adherence to 23 MIBO checklist items.

Relevant as a 2025 evidence synthesis focused on PRP RCT reporting (not a meta analysis of efficacy); includes only RCTs with IA PRP but evaluates reporting completeness rather than clinical/structural/safety outcomes.

[54] [Platelet-rich plasma versus hyaluronic acid in knee osteoarthritis: A meta-analysis with the consistent ratio of injection](#)

Qipeng Wu, ..., and B. Mi. *Journal of Orthopaedic Surgery*, 2020. 61 citations.

36% Topic Match

Compares PRP versus hyaluronic acid efficacy in knee osteoarthritis via meta analysis.

Pools 10 randomized trials (searched to May 2018) comparing PRP vs HA on pain/function (IKDC, WOMAC, VAS/NRS, KOOS).

Relevant but somewhat related only: knee specific RCTs included, but no placebo/sham or standard care control arms reported, no structural imaging outcomes, and limited safety reporting.

[55] [Sex differences in intra articular treatment outcomes for knee osteoarthritis: Current evidence and research gaps: A systematic review and meta analysis](#)

Gae Fattini Fellini, ..., and Giuseppe Filardo. *Journal of Experimental Orthopaedics*, 2025. 0 citations.

34% Topic Match

Synthesizes sex specific outcomes after intra articular CS, HA, PRP, and cell therapies for knee OA.

Conducts a systematic review and meta analysis (2025) pooling trials to compare male vs female treatment responses across injection types.

Relevant as an evidence synthesis (2020–2026 window) but scope includes cell based therapies; need to confirm inclusion criteria: whether analyses restricted to RCTs/placebo controlled knee only trials and which outcomes (clinical, structural, safety) were reported separately by sex.

[56] [Comparative efficacy of intra-articular platelet-rich plasma, hyaluronic acid, corticosteroids, and NSAIDs for knee osteoarthritis: A retrospective cohort study](#)

Y. Gökceo lu, ..., and Sedat Demir. *Medicine*, 2025. 0 citations.

32% Topic Match

Compares clinical outcomes of intra articular PRP, HA, CS, and NSAID injections for knee OA.

Retrospective cohort of 205 knees (KL 2–3) treated 2016–2021; VAS and WOMAC at baseline and 6–12 month follow up.

Relevance: non randomized, single site retrospective design (2025); includes IA injections but lacks placebo/sham or standard care control, limited structural outcome reporting (only KL grade), and no major safety signals reported.

[57] [Is platelet-rich plasma better than hyaluronic acid in the treatment of knee osteoarthritis? A meta-analysis of randomized controlled trials](#)

Lichun Wang, ..., and S. Rastogi. *Videosurgery and other Minimally Invasive Techniques*, 2022. 6 citations.

31% Topic Match

Abstract: Introduction Due to the complicated surgical procedure of knee arthroplasty and low effectiveness of hyaluronic acid (HA) in the treatment of knee osteoarthritis, various studies highly recommend the use of platelet-rich plasma (PRP). However, some studies also reported lower efficacy and limited use of PRP. Aim To analyze systematically the different randomized controlled trials (RCTs) comparing the effectiveness of HA vs. PRP for the treatment of knee osteoarthritis. Material and methods A systematic literature review was conducted using Medline and Central databases for RCTs about the comparison of HA vs. PRP for the treatment of knee osteoarthritis. Studies were included...

[58] [Comparative study of clinical and functional outcome of treatment of mild to moderate osteoarthritis of knee joint between intra articular platelet-rich plasma and Hyaluronic acid injection](#)

Dr. C Dinesh, ..., and Dr. A Manikandarajan. *International Journal of Orthopaedics Sciences*, 2020. 1 citations.

30% Topic Match

Abstract: Aim: To compare the clinical and functional outcomes of treatment of mild to moderate osteoarthritis of knee joint by using intra-articular platelet-rich plasma injection versus hyaluronic acid injection. Methods: Total of 60 patients with grade 0 to grade 2 osteoarthritis were included in the study, of which 30 were treated with intra-articular PRP and the other 30 with intra-articular HA. Patients were evaluated before and after the procedure using Visual Analogue Scale (VAS) and Western Ontario McMaster Universities Osteoarthritis Index (WOMAC) at 6, 12, 24 weeks respectively. Results: Both groups had clinical improvement but excellent results were seen in the group...

[59] [Leukocytes Do Not Influence the Safety and Efficacy of Platelet-Rich Plasma Injections for the Treatment of Knee Osteoarthritis: A Double-Blind Randomized Controlled Trial](#)

Iacopo Romandini, ..., and G. Filardo. *The American Journal of Sports Medicine*, 2024. 21 citations.

29% Topic Match

Abstract: Background: Platelet-rich plasma (PRP) is increasingly used for the injection treatment of knee osteoarthritis (OA). However, the role of leukocytes contained in PRP is controversial, with some preclinical studies suggesting detrimental effects and others emphasizing their contribution in secreting bioactive molecules. Purpose: To compare the safety and effectiveness of leukocyte-rich PRP (LR-PRP) and leukocyte-poor PRP (LP-PRP) for the treatment of knee OA. Hypothesis: That leukocytes could influence results both in terms of adverse events and clinical outcomes. Study Design: Randomized controlled trial; Level of evidence, 1. Methods: This double-blind randomized controlled trial included 132 patients with Kellgren-Lawrence grade 1–3 knee...

[60] [Intra articular corticosteroids for the treatment of osteoarthritis: A systematic review and meta analysis on the comparison of different molecules and doses](#)

Alessandro Bensa, ..., and G. Filardo. *Journal of Experimental Orthopaedics*, 2024. 14 citations.

25% Topic Match

Abstract: The purpose of this study was to quantify and compare the clinical relevance of the different intra articular corticosteroids (CS) effects in vivo for osteoarthritis (OA) treatment.

[61] [Intra-Articular Leukocyte-Rich Platelet-Rich Plasma versus Intra-Articular Hyaluronic Acid in the Treatment of Knee Osteoarthritis: A Meta-Analysis of 14 Randomized Controlled Trials](#)

Yu-Ning Peng, ..., and A. Suputtitada. *Pharmaceuticals*, 2022. 11 citations.

## 25% Topic Match

Abstract: (1) Background: To evaluate the clinical effects of leukocyte-rich platelet-rich plasma (LR-PRP) and hyaluronic acid (HA) injections in treating patients suffering from knee osteoarthritis (OA); (2) Methods: Randomized controlled trials (RCTs) were searched from PubMed, Web of Science, and Cochrane Library. Keywords were: platelet-rich plasma, LR-PRP, leukocyte-rich, hyaluronic acid, and knee osteoarthritis. The included RCTs were published between the 1st of November 2011 and the 3rd of February 2021. Western Ontario and McMaster Universities Arthritis Index (WOMAC) scores, visual analog scale (VAS) scores, International Knee Documentation Committee (IKDC) scores, and adverse events were used as outcomes for evaluation; (3) Results:...

[62] [A comparative analysis of the efficacy of intra-articular injections of corticosteroid, hyaluronic acid and platelet-rich plasma for the treatment of osteoarthritis knee](#)

Anant Akash and U. Gupta. International Journal of Orthopaedics Sciences, 2020. 0 citations.

## 24% Topic Match

Abstract: Background: Osteoarthritis (OA) of the knee is the most common chronic degenerative joint disease characterized by pain, stiffness, swelling and progressive functional limitation in elderly. Non-surgical management modalities like physical therapy, lifestyle modification and oral non-steroidal antiinflammatory drugs, are often ineffective or do not alleviate symptoms adequately. Intra-articular corticosteroid (CS) and hyaluronic acid (HA) injections have been used for long to alleviate the symptoms of knee OA. Recently platelet-rich plasma (PRP) therapy has also been tried widely. Very few researches involving a comparison of the three have been conducted. The purpose of the present study was to evaluate the therapeutic...

[63] [Platelet-rich plasma injection is more effective than hyaluronic acid in the treatment of knee osteoarthritis](#)

E. Holguin. Orthopaedic Journal of Sports Medicine, 2014. 49 citations.

## 24% Topic Match

Abstract: Objectives: To determine and compare the effects of autologous platelet rich plasma (PRP) and hyaluronic acid (HA) for the treatment of osteoarthritis of the knee. Methods: This prospective study included 150 patients affected by severe osteoarthritis of the knee. Gonarthrosis was graded using the Kellgren-Lawrence and Aliback radiographic classification scale. 150 patients were randomized into 2 study groups .In the PRP group (n=55) three intraarticular injection were applied andthe control group (n=55) received 3 intra-articular injections of high molecular weight HA. An unblinded physician performed infiltration once a week for 3 weeks into the knee affected by clinically relevant gonarthrosis...

[64] [A comparative study between role of platelet rich plasma \(PRP\) and corticosteroid injection in the treatment of osteoarthritis knee](#)

Anand Kumar, ..., and Ashutosh Kumar. International Journal of Orthopaedics Sciences, 2021. 4 citations.

## 24% Topic Match

Abstract: Background: Osteoarthritis is the most prevalent type of arthritis, which significantly impacts the patient's mobility and quality of life. Pharmacological treatments for osteoarthritis, such as corticosteroids, produce an immediate reduction of the patient's pain as well as an improvement in the patient's mobility and quality of life, but with a limited long-term efficacy. In this context, platelet-rich plasma (PRP) infiltrations represent a therapeutic tool due to its trophic properties and its ability to control inflammatory processes. Evidence on the effect of platelet-rich plasma (PRP) in treating osteoarthritis (OA) is insufficient. Therefore, the present study compares the effects of a one-time...

[65] [Efficacy of Oxygen-Ozone Therapy and Platelet-Rich Plasma for the Treatment of Knee Osteoarthritis: A Meta-analysis and Systematic Review](#)

P. Rahimzadeh, ..., and S. Faiz. Anesthesiology and Pain Medicine, 2022. 7 citations.

## 24% Topic Match

Abstract: Context This systematic review and meta-analysis evaluated the effect of the intra-articular injection of platelet-rich plasma (PRP) and oxygen-ozone therapy and provided an evidence-based methodology to treat KOA. Method Databases, including Cochrane Library, PubMed, and EMBASE, were searched. The retrieval period was before 2021. Two reviewers performed the process of screening and data extraction. Mean differences were calculated [95% confidence interval (CI)] with an inverse-variance method and fixed effect model. Meta-analysis was performed using the latest version of STATA version 16. Results A total of 12 studies out of 769 articles were evaluated. The mean difference of visual analog scale...

[66] [Efficacy of Platelet-Rich Plasma versus Hyaluronic Acid for treatment of Knee Osteoarthritis: A systematic review and meta-analysis](#)

Hassan Niroomand Sadabadi, ..., and H. Dehghan. Electronic Physician, 2016. 68 citations.

## 21% Topic Match

Abstract: Introduction Knee osteoarthritis is a very common chronic degenerative disease that could impose significant costs to the health system. Although osteoarthritis can affect all joints, knee osteoarthritis is the most common type among adolescents. Non-surgical treatments include corticosteroids injection, hyaluronic acid, and platelet-rich plasma. The aim of this study was to investigate the efficiency of platelet-rich plasma versus hyaluronic acid for the treatment of knee osteoarthritis. Methods Pubmed, Cochran library, Scopus and Ovid databases were investigated to identify related studies from 2000 through August 2015. To study the efficiency, Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) outcome using the...

[67] [Comparative Effectiveness of Pharmacologic Interventions for Knee Osteoarthritis](#)

J. Moloo. NEJM Journal Watch, 2015. 214 citations.

## 20% Topic Match

No summary or abstract available

[68] [Intra-articular platelet-rich plasma versus hyaluronic acid in the treatment of knee osteoarthritis: a meta-analysis](#)

Huafeng Zhang, ..., and Zhi-jun Li. Drug Design, Development and Therapy, 2018. 96 citations.

## 20% Topic Match

Abstract: Purpose Platelet-rich plasma (PRP) and hyaluronic acid (HA) have been increasingly used in recent years to treat knee osteoarthritis (OA). However, whether PRP is superior to HA is controversial. Methods We conducted an electronic search of PubMed, Embase, ScienceDirect, and Cochrane library. The pooled data were analyzed using RevMan 5.1. Results Three prospective and ten randomized trials were identified. PRP injections reduced pain more effectively than HA injections in OA of the knee at 6 months (mean difference [MD]= 14.18; 95% confidence interval [CI]: 26.12 to 2.23; P=0.02; I<sup>2</sup>=95%) and 12 months (MD= 15.25; 95% CI: 22.17 to 8.32; P<0.01; I<sup>2</sup>=81%) of...

[69] [Clinical Efficacy of Platelet-Rich Plasma Injection and Its Association With Growth Factors in the Treatment of Mild to Moderate Knee Osteoarthritis: A Randomized Double-Blind Controlled Clinical Trial As Compared With Hyaluronic Acid](#)

Yong-Beom Park, ..., and Dong-hyun Lee. The American Journal of Sports Medicine, 2021. 87 citations.

## 20% Topic Match

Abstract: Background: Although platelet-rich plasma (PRP) has potential as a regenerative treatment for knee osteoarthritis, its efficacy varies. Compositional differences among types of PRP could affect clinical outcomes, but the biological characterization of PRP is lacking. Purpose: To assess the efficacy of intra-articular PRP injection in knee osteoarthritis as compared with hyaluronic acid (HA) injection and to determine whether the clinical efficacy of PRP is associated with its biological characteristics. Study Design: Randomized controlled trial; Level of evidence, 1. Methods: A total of 110 patients with symptomatic knee osteoarthritis received a single injection of leukocyte-rich PRP (1 commercial kit) or HA....

[70] [Clinical and Functional Outcomes Following Intra-articular Platelet-Rich Plasma Injection for Knee Osteoarthritis: A Prospective Cohort Study](#)

Thivagar Murugesan, ..., and Pedapati Ssk Vijaya Guna Surya. Cureus, 2025. 0 citations.

## 19% Topic Match

Abstract: Background and objective Knee osteoarthritis (OA), a common degenerative joint disease, often leads to chronic pain and disability, particularly in middle-aged individuals. With growing interest in regenerative therapies, platelet-rich plasma (PRP) has emerged as a potential biological treatment due to its anti-inflammatory and reparative properties. This study aimed to evaluate the clinical and functional outcomes following intra-articular PRP injections in patients with early-stage knee OA. Methodology A prospective clinical trial was conducted at a tertiary care center involving 113 patients diagnosed with Kellgren-Lawrence grade 1 or 2 knee osteoarthritis. Each participant received a single intra-articular PRP injection and was followed...

[71] [Microfragmented Adipose Tissue as an Alternative to Platelet-Rich Plasma for Intra-articular Injection in Knee Osteoarthritis: A Systematic Review and Meta-analysis of Randomized Controlled Trials](#)

Yong-Beom Park, ..., and Jun-Ho Kim. The American Journal of Sports Medicine, 2025. 0 citations.

## 17% Topic Match

Abstract: Background: Intra-articular (IA) injections of orthobiologics, such as platelet-rich plasma (PRP) and microfragmented adipose tissue (MFAT), have recently gained attention as treatments for knee osteoarthritis (OA). However, clinical evidence supporting their use remains limited. Purpose: To evaluate the effectiveness and safety of IA injections of PRP and MFAT in patients with knee OA and to compare these 2 treatment modalities. Study Design: Systematic review and meta-analysis; Level of evidence, 2. Methods: A systematic search was conducted in the MEDLINE, Embase, and Cochrane Library databases to identify randomized controlled trials assessing the efficacy and safety of PRP or MFAT injections in...

[72] [Effects and safety of the combination of platelet-rich plasma \(PRP\) and hyaluronic acid \(HA\) in the treatment of knee osteoarthritis: a systematic review and meta-analysis](#)

Jinlong Zhao, ..., and Jun Liu. *BMC Musculoskeletal Disorders*, 2020. 123 citations.

17% Topic Match

Abstract: Background Studies have shown that the combined application of hyaluronic acid (HA) and platelet-rich plasma (PRP) can repair degenerated cartilage and delay the progression of knee osteoarthritis (KOA). The purpose of this study was to explore the efficacy and safety of the intra-articular injection of PRP combined with HA compared with the intra-articular injection of PRP or HA alone in the treatment of KOA. Methods The PubMed, Cochrane Library, EMBASE and China National Knowledge Infrastructure (CNKI) databases were searched from inception to December 2019. Randomized controlled trials and cohort studies of PRP combined with HA for KOA were included. Two...

[73] [Evaluating the Efficacy and Safety of Intra - Articular Corticosteroid versus Hyaluronic Acid Injections in the Treatment of Knee Osteoarthritis: A Comparative Analysis of Randomized Controlled Trials](#)

Ashwani Sadana Choudhary Abdul. *International Journal of Science and Research (IJSR)*, 2024. 0 citations.

17% Topic Match

Abstract: : Overview: Articular cartilage deterioration is a prevalent, chronic joint condition known as osteoarthritis (OA) of the knee. It has been shown that intra - articular HA injections are helpful in the treatment of osteoarthritis (OA), since they improve the viscosity of synovial fluid and joint lubrication, restore hyaluronic synthesis, prevent proteoglycan breakdown, and have analgesic and anti - inflammatory properties. For the past ten years, CS have been used to treat OA, and they seem to be reasonably safe. Because CS affect both the mechanisms that contribute to the functioning of inflammatory cytokines and the cytokines themselves, they have...

[74] [Platelet Rich Plasma Versus Corticosteroid Injections in Treatment of Knee Osteoarthritis](#)

Zeyad Buahlaika, ..., and Sanad Younes. *AlQalam Journal of Medical and Applied Sciences*, 2024. 0 citations.

17% Topic Match

Abstract: This study seeks to assess and compare the impact and functional outcomes of platelet-rich plasma and corticosteroid injections in individuals with knee osteoarthritis. In this prospective study, sixty randomly selected patients diagnosed with mild to moderate knee osteoarthritis were included. The patients underwent treatment with either platelet-rich plasma or corticosteroid injection. The assessment of patients was conducted during a follow-up period ranging from six months to one year, utilizing the visual analog scale and the Knee Injury and Osteoarthritis Outcome Score. Written informed consent was obtained from each participant included in the study. This study revealed that patients treated with...

[75] [Efficacy and safety of multiple intra-articular corticosteroid injections for osteoarthritis-a systematic review and meta-analysis of randomized controlled trials and observational studies.](#)

S. Ayub, ..., and Weiya Zhang. *Rheumatology*, 2021. 22 citations.

16% Topic Match

Abstract: OBJECTIVES To investigate the efficacy and safety of multiple intra-articular corticosteroid (IACS) injections for the treatment of OA. METHODS We conducted electronic searches of several databases for randomized controlled trials (RCTs) and observational studies. Standard mean difference was calculated for efficacy, whereas hazard ratio (HR) was used for adverse effects. Results were combined using the random effects model. Heterogeneity was measured using I<sup>2</sup> statistics. RESULTS Six RCTs were included for efficacy assessment. The use of multiple IACS appeared to be better than comparator (standard mean difference for pain -0.47, 95% CI -0.62, 0.31). However, there was considerable heterogeneity (I<sup>2</sup> 92.6%)...

[76] [Therapeutic trajectory following intra-articular hyaluronic acid injection in knee osteoarthritis--meta-analysis.](#)

Raveendhara R. Bannuru, ..., and T. McAlindon. *Osteoarthritis and cartilage*, 2010. 408 citations.

16% Topic Match

No summary or abstract available

[77] [Evaluating the Efficacy of Platelet-Rich Plasma in Treating Primary Knee Osteoarthritis: A Prospective Interventional Study](#)

Prant Gupta, ..., and Ajay Bharti. *Cureus*, 2024. 7 citations.

15% Topic Match

Abstract: Introduction: Knee osteoarthritis (OA) is a prevalent degenerative joint disorder causing pain, stiffness, and reduced function, significantly impacting the quality of life. Current treatments mainly provide symptomatic relief, with limited efficacy in halting disease progression. Platelet-rich plasma (PRP), a biological therapy rich in growth factors, has gained attention as a potential treatment for knee OA due to its regenerative properties. This study evaluates the efficacy of PRP in managing primary knee OA. Methodology: This prospective interventional study included 100 patients diagnosed with primary knee OA, categorized using the Kellgren-Lawrence grading scale. Leukocyte-reduced PRP was prepared using the double-spin method and...

[78] [Efficacy of intra-articular injection of combined platelet-rich plasma and hyaluronic acid in knee degenerative joint disease \(182\)](#)

P. Randelli, ..., and A. Menon. *Orthopaedic Journal of Sports Medicine*, 2021. 0 citations.

14% Topic Match

Abstract: Objectives: Osteoarthritis (OA) of the knee is a debilitating disease whose prevalence has increased across the world with aging population. Platelet-Rich Plasma (PRP) and Hyaluronic Acid (HA) injections appear to be two of the main strategies for conservative treatment of early knee OA. The effectiveness of both treatments, however, is still under debate because contrasting results have been described in the current literature. Some pre-clinical studies evaluated the association of PRP and HA with encouraging results, highlighting the possibility of a synergistic effect between the two compounds and suggesting a possible use through combined intra-articular injections. The aim of this...

[79] [Efficacy of Intra-Articular Injection of Platelet-Rich Plasma Combined with Mesenchymal Stem Cells in the Treatment of Knee Osteoarthritis: A Systematic Review and Meta-Analysis](#)

Weipeng Zeng, ..., and Caifeng Pei. *International Journal of Clinical Practice*, 2022. 11 citations.

14% Topic Match

Abstract: Objective. This study systematically evaluated the effect of intra articular injection of platelet rich plasma (PRP) and mesenchymal stem cells (MSC) on knee osteoarthritis (KOA). Methods. Randomized controlled trials (RCTs) of PRP combined with MSC in the treatment of KOA were collected from PubMed, Cochrane Library, Web of Science, Wiley online library, CNKI, and Wanfang databases from inception to July 30, 2022. Two researchers read and screened the literature to extract the data, respectively. After conducting a risk of bias assessment of included data, RevMan 5.3 software was used for meta analysis. The Cochrane Handbook risk of bias assessment tool was used to evaluate the included literature....

[80] [Intra-articular injection of Platelet rich plasma versus Hyaluronic acid for moderate knee osteoarthritis. A prospective, double-blind randomized controlled trial on 189 patients with follow-up for three years.](#)

Medhat Sdeek, ..., and Ahmed Darweash. *Acta orthopaedica Belgica*, 2021. 34 citations.

14% Topic Match

Abstract: Platelet-rich plasma injections have been proposed as an option for Conservative management of knee Osteoarthritis to provide symptomatic relief and also to delay the need for surgical intervention. Although almost all the current literatures provide some evidence on the benefits of this technique compared with Visco- supplementation, no studies have been performed to compare their Clinical outcomes. The purpose is to compare the Clinical outcomes provided by intra-articular injection of either Platelet rich plasma or Hyaluronic acid to treat knee Osteoarthritis. Study Design: Randomized Controlled Trial 200 Patients with a history of Symptomatic knee Osteo- arthritis (Kellgren-Lawrence grade 2...

[81] [Double-Blind Randomized Controlled Trial Comparing Platelet-Rich Plasma With Intra-Articular Corticosteroid Injections in Patients With Bilateral Knee Osteoarthritis](#)

Jacques Pretorius, ..., and Sayed Nadeem. *Cureus*, 2022. 13 citations.

### 13% Topic Match

Abstract: Introduction Platelet-rich plasma (PRP) intra-articular injections have gained popularity and are suggested to be more effective and longer lasting than corticosteroid or visco-supplementation therapy. There are few studies comparing PRP with corticosteroid injections and none comparing PRP in patients with bilateral knee osteoarthritis with the patient acting as their own control. Methods We performed a double-blind randomized controlled trial including 29 patients (58 knees) with radiologically confirmed mild-to-moderate bilateral knee osteoarthritis. They were randomized to receive an intra-articular PRP injection into one knee and a methylprednisolone injection with a local anesthetic into the contralateral knee. The primary outcome was measured...

### [82] [Relative efficacy of hyaluronic acid in comparison with NSAIDs for knee osteoarthritis: a systematic review and meta-analysis.](#)

Raveendhara R. Bannuru, ..., and T. McAlindon. *Seminars in arthritis and rheumatism*, 2014. 175 citations.

### 13% Topic Match

No summary or abstract available

### [83] [Functional outcome of intra articular platelet rich plasma injections in early osteoarthritis knee](#)

C. Rajasekaran, ..., and Surendher Kumar R. *Indian Journal of Orthopaedics Surgery*, 2020. 1 citations.

### 12% Topic Match

Abstract: Background: The effectiveness of platelet-rich plasma (PRP) injections for osteoarthritis (OA) is still controversial. We investigated the effect of PRP injections in patients with knee osteoarthritis based on decreasing pain, improving function. Purpose: To assess the outcome of intra-articular platelet-rich plasma (PRP) injections into the knee in patients with early stages of osteoarthritis (OA). Materials and Methods: This is a prospective study in which 50 knees were followed up for a minimum of 6 months. Two intra articular injections were injected at one month interval. The outcome was assessed using WOMAC and Visual Analogue Scale (VAS) recorded prior to injection...

### [84] [Analogies Between Platelet-Rich Plasma Versus Hyaluronic Acid Intra-articular Injections in the Treatment of Advanced Knee Arthritis: A Single-Center Study](#)

Ahmed Abu-Awwad, ..., and Gheorghe Szilagyi. *Cureus*, 2024. 3 citations.

### 11% Topic Match

Abstract: Background Knee osteoarthritis (KOA), a degenerative joint disease, is a common cause of chronic knee pain and disability in adults. Conservative management options are the first-line approach, but intra-articular injections, such as platelet-rich plasma (PRP) and hyaluronic acid (HA), are considered for advanced cases. This study aims to compare the efficacy of PRP versus HA injections in patients with advanced KOA. Methods A retrospective study was conducted on 145 patients with advanced KOA. Seventy patients received PRP injections, while 75 patients received HA injections. The Visual Analog Scale (VAS), Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score, and International...

### [85] [Mixed Treatment Comparisons for Nonsurgical Treatment of Knee Osteoarthritis: A Network Meta-analysis](#)

D. Jevsevar, ..., and D. Cummins. *Journal of the American Academy of Orthopaedic Surgeons*, 2018. 61 citations.

### 11% Topic Match

No summary or abstract available

### [86] [The efficacy and safety of intra-articular platelet-rich plasma versus sodium hyaluronate for the treatment of osteoarthritis: Meta-analysis](#)

Qinglin Liu, ..., and Hao Chen. *PLOS One*, 2025. 5 citations.

### 11% Topic Match

Abstract: Background Knee osteoarthritis (KOA) is a common degenerative joint disease that primarily affects the elderly individuals. Traditional treatments include medications and physical therapy, but recent attention has turned to platelet-rich plasma (PRP) and hyaluronic acid (HA) injection therapies. Objective This meta-analysis aimed to evaluate the efficacy and safety of PRP combined with HA versus PRP alone in the treatment of KOA. Methods We conducted a comprehensive literature search of the PubMed, Embase, and Cochrane Library databases, which included covering publications from their inception to July 2024. Studies comparing PRP+HA with PRP alone were selected. Data on visual analog scale (VAS)...

### [87] [Clinical and radiographic comparison of a single LP-PRP injection, a single hyaluronic acid injection and daily NSAID administration with a 52-week follow-up: a randomized controlled trial](#)

David Buendía-López, ..., and Miguel A. Fernández-Villacañas Marín. *Journal of Orthopaedics and Traumatology : Official Journal of the Italian Society of Orthopaedics and Traumatology*, 2018. 124 citations.

### 11% Topic Match

Abstract: BackgroundKnee osteoarthritis (OA) is a disease with a high prevalence in the adult population. Nonsteroidal anti-inflammatory drugs (NSAID) or intra-articular injections [hyaluronic acid (HA) or platelet-rich plasma (PRP)] can provide clinical benefit. Magnetic resonance imaging (MRI) has proven to be useful for the evaluation of cartilage volume and thickness in knee osteoarthritis. The purpose of this study was to evaluate the benefit provided by PRP injection in comparison with hyaluronic acid and NSAID in knee OA patients and to compare the radiographic evolution at the 52-week follow-up.MethodsOne hundred and six patients were enrolled and randomized according to the Spanish Rheumatology...

### [88] [Corticosteroids, hyaluronic acid, platelet-rich plasma, and cell-based therapies for knee osteoarthritis - literature trends are shifting in the injectable treatments' evidence: a systematic review and expert opinion](#)

Alessandro Bensa, ..., and G. Filardo. *Expert Opinion on Biological Therapy*, 2025. 14 citations.

### 11% Topic Match

Abstract: ABSTRACT Introduction The aim of this systematic review was to quantify the data available on corticosteroids (CS), hyaluronic acid, (HA), platelet-rich plasma (PRP), and cell-based therapies for knee osteoarthritis (OA) treatment. Methods A literature search was conducted on PubMed, Cochrane, and Web of Science according to the PRISMA guidelines. Inclusion criteria: clinical studies of any level of evidence, written in English, evaluating the intra-articular use of CS, HA, PRP, or cell-based therapies for knee OA treatment. Results The initial search identified 17,415 records. A total of 766 studies from 1959 were included. Of these, 401 were randomized controlled trials (RCTs),...

### [89] [Efficacy and Safety of Intra-articular Platelet-Rich Plasma \(PRP\) Versus Corticosteroid Injections in the Treatment of Knee Osteoarthritis: A Systematic Review of Randomized Clinical Trials](#)

Diego Ivan Diaz Haaz and Oswaldo Rizo Castro. *Cureus*, 2025. 3 citations.

### 11% Topic Match

Abstract: Osteoarthritis (OA) is a prevalent condition that significantly impacts the quality of life due to pain and associated disability. Platelet-rich plasma (PRP) injections have emerged as a promising alternative treatment, though their efficacy and safety remain debatable. This systematic review aims to evaluate the efficacy and safety of PRP injections in patients with knee OA by analyzing randomized clinical trials (RCTs). A comprehensive search was conducted across PubMed, Cochrane Central Register of Controlled Trials (CENTRAL), and the Virtual Health Library (VHL) for studies published from 2019 to 2024, following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines....

### [90] [Role of platelet rich plasma in osteoarthritis of the knee joint](#)

Samer Redah. *Medical Journal of Babylon*, 2022. 1 citations.

### 10% Topic Match

Abstract: Background: Osteoarthritis (OA) is a leading cause of disability and doubles the number of visits to primary care practitioners for those with the condition in comparison to those without. OA affects the knee more often than any other joint. Platelet-rich plasma (PRP) is a concentrate of autologous blood growth factors which has been shown to provide some symptomatic relief in early osteoarthritis (OA) of the knee. Objective: the aim of this prospective study is to demonstrate the effectiveness of prp injection in patients with OA of the knee. Materials and Methods: 60 patients with 74 knees affected by variable grades...

### [91] [Intra-articular injection of hyaluronic acid for treatment of osteoarthritis knee: comparative study to intra-articular corticosteroids](#)

Soad Elsawy, ..., and M. Ahmed. *Egyptian Rheumatology and Rehabilitation*, 2017. 5 citations.

### 10% Topic Match

Abstract: Objective Osteoarthritis (OA) is a chronic degenerative joint disease characterized by pain and progressive functional limitation. Although both corticosteroid and hyaluronic acid (HA) injections are widely used to palliate the symptoms of knee OA, few researches involving a comparison of two interventions have been conducted. The objective of the study was to compare the efficacy and safety of HA to corticosteroid injections for the treatment of knee OA. Patients and methods

We enrolled 60 patients with knee OA who were randomized to receive intra-articular injection of either HA or the corticosteroid. The therapy was followed for 6 months. The patients...

[92] [Impact of the numbers of injections of platelet rich plasma on the clinical outcomes in patients with knee osteoarthritis](#)

Pan Wang, ..., and Zhengjiang Li. Medicine, 2021. 0 citations.

9% Topic Match

Abstract: Abstract Background: Two published meta-analyses have investigated the effects of the number of injections of platelet rich plasma (PRP) on clinical outcomes in knee osteoarthritis patients, however conflicting findings were generated. Methods: We will systematically search PubMed, Embase, and China National Knowledge Infrastructure (CNKI) to capture additional eligible studies. After screening citations, extracting essential data, assessing the risk of bias, we will use RevMan software and Open BUGS to perform head-to-head and network meta-analysis of pain alleviation and improvement of joint functionality, respectively. Discussion: Knee joint osteoarthritis (KOA) is the main cause of joint degeneration in elderly, which seriously reduces...

[93] [Platelet-rich Plasma Superiority over Hyaluronic Acid as a Conservative Treatment for Early Knee Osteoarthritis: A Systematic Review](#)

Gian Ivander, ..., and Yovita Anggono. Open Access Macedonian Journal of Medical Sciences, 2024. 0 citations.

9% Topic Match

Abstract: Abstract AIM: This study aimed to perform a systematic review (SR) of SR to elucidate prior findings regarding favorable outcomes between platelet-rich plasma (PRP) and hyaluronic acid (HA) injections for early knee osteoarthritis (KOA). MATERIALS AND METHODS: We conducted a thorough literature search adhering to the Preferred Reporting Items for SR and Meta-analyses only for SRs from PubMed, ScienceDirect, and Google Scholar from 2020 to 2023. The inclusion and exclusion criteria were determined using the population, intervention, comparison, outcome, and study design model. A measurement tool to assess SR-2 was used to grade the included SRs. Two researchers independently searched,...

[94] [Hyaluronic Acid Versus Platelet-Rich Plasma: A Prospective, Double-Blind Randomized Controlled Trial Comparing Clinical Outcomes and Effects on Intra-articular Biology for the Treatment of Knee Osteoarthritis](#)

B. Cole, ..., and L. Fortier. The American Journal of Sports Medicine, 2017. 362 citations.

8% Topic Match

No summary or abstract available

[95] [The Potential of Intra-Articular Therapies in Managing Knee Osteoarthritis: A Systematic Review](#)

C. Pojala, ..., and Lorena Dima. Clinics and Practice, 2024. 6 citations.

8% Topic Match

Abstract: Background: Knee osteoarthritis (KOA) is a common degenerative and progressive joint disorder that negatively influences patients' quality of life. Intra-articular therapies, such as hyaluronic acid (HA) and platelet-rich plasma (PRP), have garnered attention for their potential to manage osteoarthritis OA symptoms effectively. This systematic review aims to identify the effectiveness and safety of HA and PRP treatment modalities in treating KOA. Methods: A literature search was conducted across MEDLINE (PubMed), Web of Science Core Collection, and Science Direct Collection Elsevier. Twenty-three randomized controlled trials, cohort studies, and observational studies were included in the review. The selection criteria focused on studies...

[96] [Comparison of Conventional Dose Versus Superdose Platelet-Rich Plasma for Knee Osteoarthritis: A Prospective, Triple-Blind, Randomized Clinical Trial](#)

Sandeep Patel, ..., and M. Dhillon. Orthopaedic Journal of Sports Medicine, 2024. 30 citations.

8% Topic Match

Abstract: Background: Confusion persists regarding the ideal dosage of platelet-rich plasma (PRP) injection for knee osteoarthritis (OA). Purpose/Hypothesis: The purpose of the study was to compare the efficacy of 2 different single-injection PRP dosages in patients with early knee OA—a conventional 4 mL dose and a superdose of 8 mL. It was hypothesized that 8 mL of PRP would be superior to 4 mL of PRP in this patient population. Study Design: Randomized clinical trial; Level of evidence, 1. Methods: Patients with early knee OA (Kellgren-Lawrence grades 1 and 2) who met the inclusion criteria were randomly divided into 2 groups:...

[97] [Comparison between the effect of intra-articular injections of platelet-rich plasma and corticosteroids in advanced knee osteoarthritis](#)

A. Ismaiel. Journal of Medicine in Scientific Research, 2018. 5 citations.

7% Topic Match

Abstract: Objective The objective of this study was to compare intra-articular injections (IAIs) of platelet-rich plasma (PRP) and corticosteroid injections in reducing pain and studying which has a more effective and lasting functional improvement. Patients and methods A total of 60 patients with chronic knee osteoarthritis (Kellgren–Lawrence grades 3 and 4) were enrolled in this study. Patients were randomized to treatment either with a single leukocyte-rich PRP or corticosteroid IAIs. Patients were assessed by visual analog scale, and Knee injury and Osteoarthritis Outcome Score at 1, 3, and 6 months after treatment. Results Our results showed improvement in all variables in...

[98] [Efficacy of Platelet-Rich Plasma on Pain and Function in the Treatment of Knee Osteoarthritis: A Prospective Cohort Study](#)

Adel H Hegazy, ..., and M. Hegazy. Cureus, 2021. 12 citations.

7% Topic Match

Abstract: Background Osteoarthritis (OA) is a degenerative disease commonly affecting the knee joints. It affects patients socially, psychologically and economically and rates of the disease have been increasing due to obesity and old age. Regardless of choosing a medically conservative approach, it is a challenge in the long term to provide OA patients efficient treatment with minimal side effects and long-term efficiency. Platelet-rich plasma (PRP) is a convenient, low-cost and affordable treatment technique used in treating knee OA with encouraging efficient and safe outcomes. In this study we will investigate the effect of PRP on knee OA. Methods This is a...

[99] [State of the art in the treatment of knee osteoarthritis using platelet-rich plasma alone or in combination: a systematic review](#)

João Paulo Rodrigues Pacheco, ..., and João Paulo Ramos de Moraes. MedNEXT Journal of Medical and Health Sciences, 2025. 0 citations.

7% Topic Match

Abstract: Introduction: Bone diseases comprise a large group of common diseases, including fractures, osteoporosis, and osteoarthritis that affect a large number of individuals. Knee osteoarthritis (KOA) refers to a chronic joint disease characterized by degenerative lesions of the knee cartilage, causing pain, swelling, dyskinesia, and other symptoms of the knee joint. According to the World Health Organization (WHO), KOA has an incidence of approximately 10-15%, with the elderly population accounting for 95%. Objective: This was to conduct a systematic review to present state of the art, through randomized clinical trials and meta-analyses, of the treatment of knee osteoarthritis using platelet-rich plasma...

[100] [AB0878 THE COMPARISON EFFECTS OF INTRA-ARTICULAR INJECTION OF PLATELET RICH PLASMA \(PRP\), PLASMA RICH IN GROWTH FACTOR \(PRGF\), HYALURONIC ACID \(HA\), AND OZONE IN KNEE OSTEOARTHRITIS; A ONE YEAR RANDOMIZED CLINICAL TRIAL](#)

S. A. Raeissadat, ..., and M. Darvish. Annals of the Rheumatic Diseases, 2020. 2 citations.

7% Topic Match

Abstract: Background: Knee osteoarthritis (OA) as a common progressive degenerative condition is one of the most important leading causes of disability and relative dependence. Worldwide prevalence of symptomatic knee OA has estimated 3.8%. It affects more than 20% of over 45-year-old population. Among the minimally invasive methods recommended for knee OA management is intra-articular injections for which a large array of products have been used. Despite all the existing options, there is still no general consensus on the choice and priority of the best intra-articular injection in knee osteoarthritis. Objectives: Our study compare the short and long-term efficacy of the intra...

[101] [THU0424 THE NEW TREATMENT APPROACH IN KNEE OSTEOARTHRITIS: EFFICACY OF CELLULAR MATRIX COMBINATION OF PLATELET RICH PLASMA WITH HYALURONIC ACID VERSUS TWO DIFFERENT TYPES OF HYALURONIC ACID \(HA\) \(PROSPECTIVE, RANDOMIZED, DOUBLE BLIND CONTROL STUDY\)](#)

B. Bara , ..., and A. Zekovic Annals of the Rheumatic Diseases, 2019. 4 citations.

6% Topic Match

Abstract: Background: Osteoarthritis pathogenesis is a complex process associated with decreased ability to regenerate cartilage mainly due to lack of physiological vascularization. One of the most commonly affected joints is the knee. Objectives: The aim of this study was to compare the efficacy of intra-articular (IA) injections of platelet rich plasma (PRP) combined with hyaluronic acid (HA) prepared with the Cellular Matrix device versus IA injections with two different types of hyaluronic

acid for treatment of knee osteoarthritis. Methods: This is a prospective, randomized, double-blind, controlled study on 53 patients (90 knees) suffering from knee osteoarthritis, divided in 3 groups. The...

[102] [Intra-articular saline injection is as effective as corticosteroids, platelet-rich plasma and hyaluronic acid for hip osteoarthritis pain: a systematic review and network meta-analysis of randomised controlled trials](#)

A. Gazendam, ..., and M. Bhandari. *British Journal of Sports Medicine*, 2020. 91 citations.

6% Topic Match

Abstract: Objective Intra-articular (IA) injections represent a commonly used modality in the treatment of hip osteoarthritis (OA). Commonly used injections include corticosteroids (CCS), hyaluronic acid (HA) and platelet-rich plasma (PRP). A network meta-analysis allows for comparison among more than two treatment arms and uses both direct and indirect comparisons between interventions. The objective of this network meta-analysis is to compare the efficacy of the various IA injectable treatments in treating hip OA at up to 6 months of follow-up. Design This is a systematic review and network meta-analysis. Bayesian random-effects model was performed to assess the direct and indirect comparisons of...

[103] [Efficacy of the combination therapy of platelet-rich plasma and hyaluronic acid on improving knee pain and dysfunction in patients with moderate-to-severe KOA: a protocol for a randomised controlled trial](#)

Yiying Mai, ..., and Li Jiang. *BMJ Open*, 2023. 12 citations.

6% Topic Match

Abstract: Introduction 54% of patients with moderate-to-severe knee osteoarthritis (KOA) still reported persistent pain and functional loss after conservative treatment according to guidelines. As an emerging treatment, platelet-rich plasma (PRP) has been proven to significantly relieve pain and improve activity function in patients with mild-to-moderate KOA, either used alone or in combination with hyaluronic acid (HA). However, it is still unclear of its efficacy in moderate-to-severe KOA. This study aims to evaluate the clinical efficacy of PRP and the combination therapy of PRP and HA in patients with moderate-to-severe KOA and to explore the potential synergistic effect of PRP and HA....

[104] [Methods of Conservative Intra-Articular Treatment for Osteoarthritis of the Hip and Knee.](#)

R. Ossendorff, ..., and F. Schildberg. *Deutsches Arzteblatt international*, 2023. 8 citations.

6% Topic Match

Abstract: BACKGROUND Osteoarthritis is a degenerative joint disease that is becoming increasingly common as the population ages. Conservative treatment for hip or knee osteoarthritis has been limited to pain control. Intra-articular injections for targeted local treatment have been widely used in clinical practice for many years. METHODS This review is based on publications retrieved by a selective literature search, including recent meta-analyses, systematic reviews, randomized controlled trials (RCTs), and current guidelines. RESULTS In Germany, the 12-month prevalence of osteoarthritis in adults is 17.9%. Conservative treatments are intended to alleviate symptoms and do not affect the progression of the disease. Glucocorticoids can...

[105] [Optimal Dosage of Platelet-Rich Plasma Injections in Patients With Osteoarthritis of the Knee: A Scoping Review](#)

Ambika Singh, ..., and Khavir A Sharieff. *Cureus*, 2024. 3 citations.

5% Topic Match

Abstract: Knee osteoarthritis (KOA) is a healthcare burden affecting over 595 million people worldwide. Recently, intra-articular platelet-rich plasma (PRP) injections from the patient's blood have shown promise in slowing KOA progression due to platelets' regenerative properties. This study aimed to evaluate the optimal dosing and schedule for PRP therapy in managing mild to moderate KOA. A systematic search was conducted across Embase, Ovid Medline, Web of Science, Cochrane Central, and CINAHL using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to identify articles published from August 2015 to March 2024. Keywords included "platelet rich plasma," "knee osteoarthritis," and...

[106] [Role of platelet-rich plasma in treatment of knee osteoarthritis](#)

Ismail A. Yassin, ..., and Mahmoud A. M. Beltagy. *Al-Azhar Assiut Medical Journal*, 2020. 1 citations.

5% Topic Match

Abstract: Background Osteoarthritis (OA) is a degenerative joint disease of multifactorial etiology and affects synovial joints. The risk of developing OA substantially increases with each decade after the age of 45 years. It is characterized by progressive deterioration and loss of articular cartilage with structural and functional changes in the entire joint, including the synovium, periarticular ligaments, and subchondral bone. Objective To assess the clinical effects of intra-articular injection of platelet-rich plasma (PRP) into the knee joint with mild to moderate OA regarding pain, quality of life, and return to activity. Patients and methods The study included 30 patients in the...

[107] [Platelet-Rich Plasma Releasate Inhibits Inflammatory Processes in Osteoarthritic Chondrocytes](#)

G. V. van Buul, ..., and G. V. van Osch. *The American Journal of Sports Medicine*, 2011. 394 citations.

5% Topic Match

No summary or abstract available

[108] [The temporal effect of platelet-rich plasma on pain and physical function in the treatment of knee osteoarthritis: systematic review and meta-analysis of randomized controlled trials](#)

Longxiang Shen, ..., and Changqing Zhang. *Journal of Orthopaedic Surgery and Research*, 2017. 325 citations.

5% Topic Match

Abstract: Background Quite a few randomized controlled trials (RCTs) investigating the efficacy of platelet-rich plasma (PRP) for treatment of knee osteoarthritis (OA) have been recently published. Therefore, an updated systematic review was performed to evaluate the temporal effect of PRP on knee pain and physical function. Methods PubMed, Embase, Cochrane library, and Scopus were searched for human RCTs comparing the efficacy and/or safety of PRP infiltration with other intra-articular injections. A descriptive summary and quality assessment were performed for all the studies finally included for analysis. For studies reporting outcomes concerning Western Ontario and McMaster Universities Arthritis Index (WOMAC) or adverse events, a random-effects...

[109] [Effectiveness of Platelet Rich Plasma Injection in Comparison with Dextrose Prolotherapy on Improving Pain and Function in Osteoarthritis of Knee: A Randomized Controlled Trial](#)

Sagolsem Adarsh Singh, ..., and Yumnam Ningthemba Singh. *International Journal of Research and Review*, 2024. 0 citations.

5% Topic Match

Abstract: Background: Osteoarthritis is a common and disabling condition that represents a substantial and increasing health burden with notable implications for the individuals affected, health-care systems, and wider socioeconomic costs. Despite significant advances in science and medicine, there is no cure for osteoarthritis. Numerous treatment options have been used for management of osteoarthritis including pharmacological and invasive techniques. Regenerative therapy like Platelet rich plasma and Prolotherapy are being extensively studied due to their ability to regenerate and repair damaged tissues. Objectives: To evaluate the effectiveness of platelet rich plasma injection in comparison with dextrose prolotherapy on improving pain and function in...

[110] [Meaningful effectiveness of platelet-rich plasma in treating patients with osteoarthritis of the knee: Meta-analysis and review](#)

A. Hegazy, ..., and A. Selim. *The Journal of the International Society of Physical and Rehabilitation Medicine*, 2019. 3 citations.

5% Topic Match

Abstract: Background: Osteoarthritis (OA) of the knee is a significant cause of disability. The current conservative treatment options include physiotherapy, analgesia, intra-articular injection of platelet-rich plasma (PRP), hyaluronic acid, or corticosteroids. Regarding PRP, some meta-analyses studies have been reported. However, these studies focused on the effectiveness of intra-articular PRP when compared to other controls, and none thoroughly investigated the anchored-based effectiveness concerning the minimal clinically important difference (MCID). Objective: We, therefore, conducted this work to address this apparent knowledge gap and to provide objective data that could be used by decision-makers. Methods: Electronic databases were searched to identify relevant publications. We...

[111] [Comparing efficacy of a single intraarticular injection of platelet-rich plasma \(PRP\) combined with different hyaluronans for knee osteoarthritis: a randomized-controlled clinical trial](#)

Hung-Ya Huang, ..., and Shu-Fen Sun. *BMC Musculoskeletal Disorders*, 2022. 27 citations.

4% Topic Match

Abstract: Background Intraarticular plasma-rich platelet (PRP) and hyaluronic acid (HA) have each been shown to be effective for treating knee osteoarthritis (OA). Evidence supporting the combination therapy is controversial. This study aimed to investigate the efficacy of a single intraarticular PRP injection combined with different HAs in patients with knee OA. Methods In this prospective randomized-controlled trial, 99 patients with Kellgren-Lawrence grade 2 knee OA with average

knee pain e 30 mm on a 0-100 mm pain visual analog scale (VAS) were randomized into two groups. The PRP + Artz group received a single intraarticular HA (Artz, 2.5 ml, 10 mg/ml)...

[112] [Comparative analysis of single-dose platelet-rich plasma and hyaluronic acid therapies in knee osteoarthritis: A 12-week follow-up study](#)

Ça lar Karaba\_ and E. A. Tezcan. Northern Clinics of Istanbul, 2025. 1 citations.

4% Topic Match

Abstract: OBJECTIVE Osteoarthritis (OA) is a prevalent and disabling joint condition that affects millions worldwide, particularly in the knee joint, and it presents limited therapeutic options. Platelet-rich plasma (PRP) and hyaluronic acid (HA) have emerged as promising intra-articular treatments. This study aimed to compare the effects of single-dose PRP and HA on pain, functionality, and stiffness in patients with knee OA over a 12-week follow-up period. METHODS A retrospective analysis was conducted on 64 patients who underwent single-dose intra-articular HA or PRP treatment for knee OA between December 2021 and June 2022. Pain and functional outcomes were assessed using the Visual...

[113] [Platelet-rich autologous plasma for the treatment of patients with grade II osteoarthritis of the knee](#)

D. Malanin, ..., and K. V. Baidova. Orthopaedic Genius, 2017. 2 citations.

3% Topic Match

Abstract: Introduction There have not been highly effective and equally safe tools available to relieve pain and improve joint function in patients suffering from osteoarthritis. Purpose Explore the efficacy of intra-articular application of autologous platelet-rich plasma (PRP) in the treatment of patients affected by grade 2 osteoarthritis of the knee. Material and methods The study was designed as a single-arm prospective randomized trial. A total of 60 patients with grade 2 osteoarthritis according to the J. Kellgren and J. Lawrence grading scale (1957) were enrolled in the study. Patients were divided into two clinical groups, with 30 subjects in each group....

[114] [Autologous protein solution inhibits MMP 13 production by IL 1 and TNF stimulated human articular chondrocytes](#)

Jennifer E Woodell-May, ..., and J. Hoepfner. Journal of Orthopaedic Research, 2011. 140 citations.

3% Topic Match

No summary or abstract available

[115] [Is local platelet-rich plasma injection clinically superior to hyaluronic acid for treatment of knee osteoarthritis? A systematic review of randomized controlled trials](#)

Y. Di, ..., and Yizhong Ren. Arthritis Research & Therapy, 2018. 60 citations.

3% Topic Match

Abstract: Background In this study, we evaluated whether platelet-rich plasma (PRP) is superior to hyaluronic acid (HA) in the treatment of knee osteoarthritis. Methods The Cochrane Central Register of Controlled Trials, PubMed, and Embase databases were searched for English-language, human *in vivo* studies on the treatment of symptomatic knee osteoarthritis with intra-articular PRP compared with HA. The following keywords were used for the search: "platelet-rich plasma," "PRP," "platelet-rich fibrin," "PRF," "platelet," "plasma," "arthritis," "osteoarthritis," "gonarthrosis," and "degeneration." Results Seven articles reporting 908 patients and 908 knees were analyzed, including 44% men and 56% women with a mean age of 59.8 years. All studies met the minimal...

[116] [The Clinical Efficacy of Platelet-Rich Plasma versus Conventional Drug Injection in the Treatment of Knee Osteoarthritis: A Study Protocol for a Randomized Controlled Trial](#)

Qirong Ma, ..., and Jianfeng Xu. Evidence-based Complementary and Alternative Medicine : eCAM, 2022. 3 citations.

3% Topic Match

Abstract: Knee osteoarthritis is a common chronic degenerative joint disease in middle-aged and elderly people. Intra-articular injection for the treatment of knee osteoarthritis is a regularly utilized nonsurgical treatment in modern medicine. Hyaluronic acid (HA) and platelet-rich plasma (PRP) are two frequently employed intra-articular devices. Hyaluronic acid (HA) is an accepted nonsurgical treatment for symptomatic KOA, and platelet-rich plasma is a popular option in the treatment of KOA in recent years. The purpose of this research is to compare the efficacy and safety of intra-articular injection of platelet-rich plasma (PRP) versus hyaluronic acid (HA) on the pain score scale, knee function,...

[117] [Does beta-hydroxybutyrate testing affect outcomes in patients with diabetic ketoacidosis?](#)

David H Pratt and T. Thrasher. Evidence-Based Practice, 2020. 0 citations.

3% Topic Match

Abstract: and 12 months (five trials, N5450; MD -1.8; 95% CI, -2.5 to -1.0; I<sup>2</sup>89%). Study limitations included inconsistencies in plasma preparations (ie, leukocyte-rich or leukocyte-poor) and differences in quantity and interval of injections. Significant statistical heterogeneity was observed in the outcomes, and several of the individual studies were underpowered. A 2018 meta-analysis of three prospective cohort studies and 10 RCTs (N51,524) compared intraarticular PRP injections versus hyaluronic acid injections for pain reduction in early knee osteoarthritis. Nine of 13 studies were included in the above 2019 meta-analysis; however, this review included four unique studies because of a search strategy that...

[118] [Platelet-Rich Plasma in Treatment of Knee Osteoarthritis](#)

M. S. Hamed. The Egyptian Journal of Hospital Medicine, 2022. 0 citations.

3% Topic Match

Abstract: Background: Osteoarthritis (OA) is one of the crucial musculoskeletal disorders that are characterized by the imbalanced homeostasis and destruction of the articular cartilage. Objective: This study aimed to evaluate the effect of platelet-rich plasma (PRP) in treatment of knee osteoarthritis. Patients and Methods: This interventional study was carried out on 20 patients who were suffering from mild to moderate primary osteoarthritis of knee joint during the period from May 2012 to March 2013. They were diagnosed clinically, and by plain x-ray and Doppler musculoskeletal ultrasound. Results: There were 5 patients (25%) experienced slight pain at the site of injection...

[119] [The Analysis Study of The Effect of Intraosseus Infiltration of Platelet Rich Plasma for Knee Osteoarthritis : A Comprehensive Systematic Review](#)

Odi Bayu Dharma Perkasa Gede and Stedi Adnyana Christian. The International Journal of Medical Science and Health Research, 2024. 0 citations.

3% Topic Match

Abstract: Background: Knee osteoarthritis (KOA) is an active, heterogeneous, and low-grade inflammatory condition leading to functional disability and pain. The aim: The aim of this study to show about the effect of intraosseus infiltration of platelet rich plasma for knee osteoarthritis. Methods: By the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) 2020, this study was able to show that it met all of the requirements. Result: Eight publications were found to be directly related to our ongoing systematic examination after a rigorous three-level screening approach. Subsequently, a comprehensive analysis of the complete text was conducted, and additional scrutiny was...

[120] [Knee Osteoarthritis Injection Choices: Platelet- Rich Plasma \(PRP\) Versus Hyaluronic Acid \(A one-year randomized clinical trial\)](#)

S. A. Raeissadat, ..., and K. Azma. Clinical Medicine Insights. Arthritis and Musculoskeletal Disorders, 2015. 306 citations.

2% Topic Match

Abstract: Introduction Knee osteoarthritis (OA) is the most common articular disease. Different methods are used to alleviate the symptoms of patients with knee OA, including analgesics, physical therapy, exercise prescription, and intra-articular injections (glucocorticoids, hyaluronic acid [HA], etc). New studies have focused on modern therapeutic methods that stimulate cartilage healing process and improve the damage, including the use of platelet-rich plasma (PRP) as a complex of growth factors. Due to the high incidence of OA and its consequences, we decided to study the long-term effect of intraarticular injection of PRP and HA on clinical outcome and quality of life of patients...

[121] [Hyaluronic Acid versus Platelet-Rich Plasma](#)

B. Cole, ..., and Brian Forsythe. Orthopaedic Journal of Sports Medicine, 2015. 27 citations.

2% Topic Match

Abstract: Objectives: Osteoarthritis (OA) is a debilitating disease that, in some form, affects up to 47 million Americans each year and is estimated to affect 67 million by 2030. Hyaluronic acid (HA) is currently utilized as an intra-articular injection for treatment of patients with knee OA. A movement in biochemical research has emerged that focuses on analysis of catabolic and anabolic growth factors of the joint. It is proposed that platelet-rich plasma (PRP) is a biologic alternative to HA that may alter the intra-articular biologic milieu to mitigate the symptoms of OA. The purpose of this double-blind prospective randomized clinical trial...

[122] [Comparison of platelet-rich plasma vs hyaluronic acid injections in patients with knee osteoarthritis](#)

Yanhong Han, ..., and Jun Liu. *Medicine*, 2018. 14 citations.

2% Topic Match

Abstract: Background: Knee osteoarthritis (KOA) is a progressive joint disease involving intraarticular and periarthritis structures. In recent years, there has been increasing interest in the use of autologous growth factors, such as intraarticular injections of platelet-rich plasma (PRP), to treat KOA. It is necessary to update the research and reevaluate the efficacy and safety of PRP to provide up-to-date evidence for KOA management. Therefore, we provide a protocol for a systematic review of PRP for KOA. Methods: The aim of this study was to retrieve papers on the topic of PRP treatment for KOA in electronic databases including PubMed, Embase, and...

[123] [Assessment of synovial repair in primary knee osteoarthritis after platelet rich plasma \(PRP\) intra-articular injection.](#)

Esraa M Bastawy, ..., and Nermin H. El-Gharbawy. *The Egyptian journal of immunology*, 2024. 1 citations.

2% Topic Match

Abstract: Primary knee osteoarthritis (KOA) is a persistent condition marked by the gradual deterioration of the joint and cartilage loss on its surfaces. Recently, platelet-rich plasma (PRP) was considered a biological intervention that alleviates symptoms and restricts the advancement of primary KOA in patients. This study aimed to evaluate the effect of intra-articular PRP injections on synovial repair through cytokine assays in 20 patients with primary KOA. Patients received two intra-articular PRP injections, spaced one month apart. The role of PRP was assessed by measuring Transforming growth factor beta (TGF- $\beta$ ) and interleukin-17 (IL-17) levels in synovial fluid before and after the...

[124] [Meta-analyses and Forest plots using a microsoft excel spreadsheet: step-by-step guide focusing on descriptive data analysis](#)

J. Neyeloff, ..., and L. Moreira. *BMC Research Notes*, 2012. 716 citations.

2% Topic Match

Abstract: Meta-analyses are necessary to synthesize data obtained from primary research, and in many situations reviews of observational studies are the only available alternative. General purpose statistical packages can meta-analyze data, but usually require external macros or coding. Commercial specialist software is available, but may be expensive and focused in a particular type of primary data. Most available softwares have limitations in dealing with descriptive data, and the graphical display of summary statistics such as incidence and prevalence is unsatisfactory. Analyses can be conducted using Microsoft Excel, but there was no previous guide available. We constructed a step-by-step guide to perform...

[125] [Viscosupplementation for Osteoarthritis of the Knee.](#)

E. Thienpont. *The New England journal of medicine*, 2015. 41 citations.

2% Topic Match

No summary or abstract available

[126] [Evaluation of platelet-rich plasma injection in knee osteoarthritis patients](#)

S. Suleiman, ..., and Mahmoud El-Sorogy. *Menoufia Medical Journal*, 2019. 0 citations.

2% Topic Match

Abstract: Objectives The aim of this study was to determine the effect of local injection of platelet-rich plasma (PRP) in patients with mild and moderate knee osteoarthritis (OA) and its effect on pain in comparison to corticosteroid injection. Background OA is one of the most prevalent chronic musculoskeletal diseases worldwide. The use of PRP appeared in the last years for the management of symptoms of knee OA. Patients and methods This study included 50 patients with knee OA. Our patients were divided to two groups: a group of 25 patients who were injected intra-articularly with about 3–4 ml of PRP and...

[127] [The Effect of Platelet-Rich Plasma on the Intra-Articular Microenvironment in Knee Osteoarthritis](#)

D. Szwedowski, ..., and S. Jeka. *International Journal of Molecular Sciences*, 2021. 110 citations.

1% Topic Match

Abstract: Knee osteoarthritis (KOA) represents a clinical challenge due to poor potential for spontaneous healing of cartilage lesions. Several treatment options are available for KOA, including oral nonsteroidal anti-inflammatory drugs, physical therapy, braces, activity modification, and finally operative treatment. Intra-articular (IA) injections are usually used when the non-operative treatment is not effective, and when the surgery is not yet indicated. More and more studies suggesting that IA injections are as or even more efficient and safe than NSAIDs. Recently, research to improve intra-articular homeostasis has focused on biologic adjuncts, such as platelet-rich plasma (PRP). The catabolic and inflammatory intra-articular processes that...

[128] [Intraarticular injections \(corticosteroid, hyaluronic acid, platelet rich plasma\) for the knee osteoarthritis.](#)

E. Ayhan, ..., and Isik Akgun. *World journal of orthopedics*, 2014. 416 citations.

1% Topic Match

Abstract: Osteoarthritis (OA) is a complex "whole joint" disease pursued by inflammatory mediators, rather than purely a process of "wear and tear". Besides cartilage degradation, synovitis, subchondral bone remodeling, degeneration of ligaments and menisci, and hypertrophy of the joint capsule take parts in the pathogenesis. Pain is the hallmark symptom of OA, but the extent to which structural pathology in OA contributes to the pain experience is still not well known. For the knee OA, intraarticular (IA) injection (corticosteroids, viscosupplements, blood-derived products) is preferred as the last nonoperative modality, if the other conservative treatment modalities are ineffective. IA corticosteroid injections provide...

[129] [Platelet-Rich Plasma for Knee Osteoarthritis: A Comprehensive Narrative Review of the Mechanisms, Preparation Protocols, and Clinical Evidence](#)

W. Glinkowski, ..., and Dariusz Zladowski. *Journal of Clinical Medicine*, 2025. 9 citations.

1% Topic Match

Abstract: Background: Platelet-rich plasma (PRP) is increasingly utilized for managing knee osteoarthritis (KOA), yet its clinical value remains debated due to the variability in preparation protocols and outcome measures. Methods: This narrative review synthesizes current evidence from 40 high-quality studies published between 2013 and March 2025, including randomized controlled trials, systematic reviews, and meta-analyses. The biological mechanisms, clinical effectiveness, safety, and implementation challenges of PRP therapy in KOA are examined. Results: PRP injections—particularly leukocyte-poor PRP—demonstrate superior pain relief and functional improvement compared to hyaluronic acid and corticosteroids, especially in patients with mild to moderate KOA (Kellgren–Lawrence grades I–III). However, heterogeneity in...

[130] [Intra-articular hyaluronic acid and corticosteroids in the treatment of knee osteoarthritis: A meta-analysis](#)

F. Wang and Xijin He. *Experimental and Therapeutic Medicine*, 2014. 54 citations.

1% Topic Match

Abstract: The aim of the present study was to evaluate the therapeutic effect of intra-articular hyaluronic acid (HA) in comparison to corticosteroids (CS) for knee osteoarthritis (OA). The data sources included PubMed, EMBASE, The Cochrane Central Register of Controlled Trials and hand searched reviews. Randomized controlled trials that reported the effects of intra-articular HA and CS in the treatment of knee OA were selected based on specific inclusion criteria. A meta-analysis was performed for the visual analog scale (VAS), Lequesne index, Knee Society Clinical Rating System (KSS), maximum flexion and adverse events of knee OA. Sensitivity analysis was also conducted to...

[131] [Non-operative treatment options for knee osteoarthritis.](#)

Michael J. DeRogatis, ..., and Michael A Mont. *Annals of translational medicine*, 2019. 78 citations.

1% Topic Match

Abstract: Background Knee osteoarthritis (OA) is a prevalent and debilitating condition for which a wide range of non-surgical treatment options are available. Although there is plethora of literature investigating their safety and efficacy, for many treatment modalities, a consensus has not yet been reached concerning efficacy. Therefore, it is essential for practitioners to understand the risks and benefits of the available treatments for the successful management of knee OA. This study explored the efficacy of non-surgical treatment options for knee OA including: (I) non-steroidal anti-inflammatory drugs (NSAIDs); (II) weight loss; (III) intra-articular injections; (IV) physical therapy; and (V) bracing. Methods A...

[132] [Current Perspectives on Platelet-Rich Plasma Injections for Knee Osteoarthritis: How to Optimize Clinical Outcomes](#)

Jaydeep Dhillon, ..., and Matthew Kraeutler. *Open Access Journal of Sports Medicine*, 2025. 0 citations.

1% Topic Match

Abstract: Abstract Knee osteoarthritis (OA) is a common degenerative joint disease affecting approximately 22% of adults over the age of 40 and is a major contributor to pain and disability worldwide. Platelet-rich plasma (PRP) has gained attention as a biologic treatment for this pathology due to its potential in modulating inflammation. This narrative review evaluates the current evidence on PRP for knee OA, comparing its efficacy to hyaluronic acid (HA), corticosteroids, and bone marrow aspirate concentrate (BMAC). High-quality studies consistently demonstrate that PRP provides superior pain relief and functional improvement compared to HA and corticosteroids and offers comparable results to BMAC....

[133] [Intra-articular platelet-rich plasma injection for knee osteoarthritis: a summary of meta-analyses](#)

Pu Chen, ..., and Qingfu Wang. *Journal of Orthopaedic Surgery and Research*, 2019. 83 citations.

1% Topic Match

Abstract: ObjectiveThe purpose of this study was (1) to perform a summary of meta-analyses comparing platelet-rich plasma (PRP) injection with hyaluronic acid (HA) and placebo injection for KOA patients, (2) to determine which meta-analysis provides the best available evidence to making proposals for the use of PRP in the treatment of KOA patients, and (3) to highlight gaps in the literature that require future investigation.Material and methodsPubMed, EMBASE, and Cochrane databases search were performed for meta-analyses which compared PRP injection with HA or placebo. Clinical outcomes and adverse events were extracted from these meta-analyses. Meta-analysis quality was assessed using the Quality...

[134] [Checklists, risk of bias tools, and reporting guidelines for research in orthopedics, sports medicine, and rehabilitation](#)

R. Prill, ..., and J. Karlsson. *Knee Surgery, Sports Traumatology, Arthroscopy*, 2023. 48 citations.

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[135] [Intra-articular use of hyaluronic acid in the treatment of osteoarthritis](#)

A. Migliore and M. Granata. *Clinical Interventions in Aging*, 2008. 84 citations.

0% Topic Match

Abstract: Osteoarthritis is one of the leading causes of disability in the elderly. The changes in the lubricating properties of synovial fluid lead to significant pain and loss of function. More than ten years have passed from the first studies. Up till now many authors have supported intra-articular hyaluronan (HA) therapy as not only a symptom-modifying therapy but also a treatment which may significantly decrease the rate of deterioration of joint structure. In this review we report data relative to knee and hip treatment. The ongoing studies continue to further our understanding of the fundamental mechanisms that likely underlie the therapeutic...

[136] [Cell-based therapies have disease-modifying effects on osteoarthritis in animal models. A systematic review by the ESSKA Orthobiologic Initiative. Part 2: bone marrow-derived cell-based injectable therapies](#)

Angelo Boffa, ..., and G. Filardo. *Knee Surgery, Sports Traumatology, Arthroscopy*, 2023. 35 citations.

0% Topic Match

Abstract: Aim of this systematic review was to determine if bone marrow-derived cell-based injectable therapies induce disease-modifying effects in joints affected by osteoarthritis (OA) in animal models. A systematic review was performed on three electronic databases (PubMed, Web of Science, Embase) according to PRISMA guidelines. A synthesis of the results was performed investigating disease-modifying effects in preclinical animal studies comparing injectable bone marrow-derived products with OA controls or other products, different formulations or injection intervals, and the combination with other products. The risk of bias was assessed according to the SYRCLE's tool. Fifty-three studies were included (1819 animals) with an increasing...

[137] [Platelet-Rich Plasma Injections for Advanced Knee Osteoarthritis: A Prospective, Randomized, Double-Blinded Clinical Trial](#)

Nayana Joshi Jubert, ..., and A. Navarro. *Orthopaedic Journal of Sports Medicine*, 2017. 119 citations.

0% Topic Match

Abstract: Background: Intra-articular injections of platelet-rich plasma (PRP) to treat symptoms of knee osteoarthritis (OA) have been successfully used in young patients and in the early stages of disease. No previous studies have analyzed outcomes of PRP injections during the late stages. Hypothesis: PRP reduces pain and leads to a more effective and lasting functional recovery than corticosteroid with local anesthetic. Study Design: Randomized controlled trial; Level of evidence, 2. Methods: A total of 75 patients with symptomatic knee OA (Kellgren-Lawrence grade 3 to 4) were enrolled in this study between August 2013 and July 2014. Patients were randomized to treatment...

[138] [Effect of Platelet-rich Plasma Injection on Disability and Pain in Individuals with Osteoarthritis Knee: A Follow-up Study of Six Months](#)

Mrinal Joshi and Mahima Agrawal. *Indian Journal of Physical Medicine and Rehabilitation*, 2019. 0 citations.

0% Topic Match

Abstract: A bstrAct Objectives: To demonstrate the effect of autologous platelet-rich plasma (PRP) injections on pain and functional activities in patients with osteoarthritis (OA) knee. Study design: Prospective interventional study. Materials and methods: A detailed demographic data were collected, and each patient was examined clinically and radiographically. Complete blood counts, prothrombin time (PT)/international normalized ratio (INR), and X-rays of bilateral knees were taken. Radiological grading was done on Kellgren–Lawrence (KL grading) OA scale. Each individual was explained and informed consent was taken before the procedure. Three injections of PRP were given at an interval of 2 weeks. Detailed clinical examination was...

[139] [Author guidelines for conducting systematic reviews and meta-analyses](#)

R. Prill, ..., and R. Becker. *Knee Surgery, Sports Traumatology, Arthroscopy*, 2021. 52 citations.

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No summary or abstract available

[140] [Cochrane handbook for systematic reviews of interventions. Version 5.1.0 \[updated March 2011\]. The Cochrane Collaboration](#)

J. Higgins. Unknown journal, 2011. 17172 citations.

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No summary or abstract available

[141] [Intra-articular Injection of Platelet-Rich Plasma Is Superior to Hyaluronic Acid or Saline Solution in the Treatment of Mild to Moderate Knee Osteoarthritis: A Randomized, Double-Blind, Triple-Parallel, Placebo-Controlled Clinical Trial](#)

Kuan-Yu Lin, ..., and Jenn-Huei Renn. *Arthroscopy : the journal of arthroscopic & related surgery : official publication of the Arthroscopy Association of North America and the International Arthroscopy Association*, 2019. 177 citations.

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No summary or abstract available

[142] [Efficacy of Platelet-Rich Plasma in the Treatment of Knee Osteoarthritis: A Meta-analysis of Randomized Controlled Trials](#)

Wenxue Dai, ..., and Jian Zhang. *Arthroscopy : the journal of arthroscopic & related surgery : official publication of the Arthroscopy Association of North America and the International Arthroscopy Association*, 2017. 377 citations.

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No summary or abstract available

[143] [Treatment With Platelet-Rich Plasma Is More Effective Than Placebo for Knee Osteoarthritis](#)

Sandeep Patel, ..., and Ashish Jain. *The American Journal of Sports Medicine*, 2013. 802 citations.

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No summary or abstract available

[144] [Treatment of knee osteoarthritis: platelet-derived growth factors vs. hyaluronic acid. A randomized controlled trial](#)

C. Lisi, ..., and G. Di Natale. *Clinical Rehabilitation*, 2018. 76 citations.

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No summary or abstract available

[145] [Comparison of the efficacy of ultrasound-guided dextrose 25% hypertonic prolotherapy and intra-articular normal saline injection on pain, functional limitation, and range of motion in patients with knee osteoarthritis: a randomized controlled trial](#)

Alireza Teymouri, ..., and Aref Nasiri. BMC Musculoskeletal Disorders, 2025. 2 citations.

Not measured Topic Match

Abstract: Knee osteoarthritis (OA) is a debilitating condition that manifests as knee pain and dysfunction. Clinicians prefer non-surgical options such as intra-articular injections for mild to moderate disease. Dextrose prolotherapy (DPTx) has been shown to have a beneficial effect on knee OA in the long-term. In this randomized controlled trial (RCT), we aimed to compare DPTx with intra-articular normal saline injection (IA-NS) to treat knee OA in terms of effectiveness and patient-reported outcomes. The study was a double-blind RCT with an allocation ratio of 1:1. We used block randomization to assign patients to each treatment arm. Patients with a visual analog...

[146] [Platelet-rich plasma therapy for knee osteoarthritis: Insights from real-world clinical data in Japan](#)

Y. Saita, ..., and M. Ishijima. Regenerative Therapy, 2025. 3 citations.

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No summary or abstract available

[147] [Randomized controlled trial comparing hyaluronic acid, platelet-rich plasma and the combination of both in the treatment of mild and moderate osteoarthritis of the knee](#)

J. F. Lana, ..., and W. Belangero. Journal of Stem Cells & Regenerative Medicine, 2016. 201 citations.

Not measured Topic Match

Abstract: Objective: This study aims at evaluating the clinical effects of Platelet Rich Plasma (PRP) and Hyaluronic Acid (HA) as individual treatments for mild to moderate Osteoarthritis (OA) and it also examines the potential synergistic effects of PRP in combination with HA. Research continues to emerge examining the potential therapeutic efficacy of HA and PRP as autologous injectable treatments for joint arthritis. However, there is a paucity of research investigating the effects of combining HA and PRP on pain and functional status in patients with OA. Design: In this multi-center, randomized, controlled, double blind, prospective trial, 105 patients with mild to...

[148] [Clinical outcomes are associated with changes in ultrasonographic structural appearance after platelet rich plasma treatment for knee osteoarthritis](#)

Hamada S Ahmad, ..., and I. Shady. International Journal of Rheumatic Diseases, 2018. 77 citations.

Not measured Topic Match

No summary or abstract available

[149] [Intra-articular Autologous Conditioned Plasma Injections Provide Safe and Efficacious Treatment for Knee Osteoarthritis](#)

P. Smith. The American Journal of Sports Medicine, 2016. 273 citations.

Not measured Topic Match

No summary or abstract available

[150] [Platelet-rich plasma with versus without hyaluronic acid for hip osteoarthritis: a systematic review and meta-analysis](#)

M. Santiago, ..., and Rosana Cipolotti. Frontiers in Bioengineering and Biotechnology, 2025. 2 citations.

Not measured Topic Match

Abstract: Background The use of intra-articular orthobiologics in hip osteoarthritis (HOA) has been presented as a therapeutic option and to postpone arthroplasty. There is little scientific evidence on the clinical application of platelet-rich plasma (PRP) associated with hyaluronic acid as dual therapy. Thus, the aim of our systematic review is to compare the clinical improvement with the use of PRP with versus without hyaluronic acid (HA) in hip osteoarthritis. Methods We systematically searched Cochrane, PubMed, and Embase databases for studies evaluating patients with HOA who received PRP with vs. without HA. Pain and functional score were collected and pooled at 3-...

[151] [Choice of intra-articular injection in treatment of knee osteoarthritis: platelet-rich plasma, hyaluronic acid or ozone options](#)

T. M. Duymu, ..., and F. N. Kesikta. Knee Surgery, Sports Traumatology, Arthroscopy, 2017. 283 citations.

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No summary or abstract available

[152] [Platelet-Rich Plasma Intra-articular Knee Injections Show No Superiority Versus Viscosupplementation](#)

G. Filardo, ..., and E. Kon. The American Journal of Sports Medicine, 2015. 248 citations.

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[153] [Effect of single injection of platelet-rich plasma in comparison with corticosteroid on knee osteoarthritis: a double-blind randomized clinical trial.](#)

B. Forogh, ..., and S. Sajadi. The Journal of sports medicine and physical fitness, 2016. 130 citations.

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No summary or abstract available

[154] [Platelet-Rich Plasma Versus Hyaluronic Acid Injections for the Treatment of Knee Osteoarthritis: Results at 5 Years of a Double-Blind, Randomized Controlled Trial](#)

A. Di Martino, ..., and G. Filardo. The American Journal of Sports Medicine, 2018. 246 citations.

Not measured Topic Match

Abstract: Background: Platelet-rich plasma (PRP) injections have been proposed as a new conservative option for knee degeneration to provide symptomatic relief and delay surgical intervention. Although the current literature provides some evidence on the benefits of this technique compared with viscosupplementation, no studies have been performed to compare their long-term effects. Purpose: To compare the long-term clinical outcomes provided by intra-articular injections of either PRP or hyaluronic acid (HA) to treat knee degenerative disease. Study Design: Randomized controlled trial; Level of evidence, 1. Methods: Patients with a history of chronic symptomatic knee degenerative changes and osteoarthritis (Kellgren-Lawrence grade 0-3) were enrolled:...

[155] [Efficacy of Intra-articular Injection of a Newly Developed Plasma Rich in Growth Factor \(PRGF\) Versus Hyaluronic Acid on Pain and Function of Patients with Knee Osteoarthritis: A Single-Blinded Randomized Clinical Trial](#)

S. A. Raeissadat, ..., and Omid Gharooi Ahangar. Clinical Medicine Insights. Arthritis and Musculoskeletal Disorders, 2017. 66 citations.

Not measured Topic Match

Abstract: Background and objectives: Knee osteoarthritis is the most common joint disease. We aimed to compare the efficacy and safety of intra-articular injection of a newly developed plasma rich in growth factor (PRGF) versus hyaluronic acid (HA) on pain and function of patients with knee osteoarthritis. Methods: In this single-blinded randomized clinical trial, patients with symptomatic osteoarthritis of knee were assigned to receive 2 intra-articular injections of our newly developed PRGF in 3 weeks or 3 weekly injections of HA. Our primary outcome was the mean change from baseline until 2 and 6 months post intervention in scores of visual analog...

[156] [OARSI guidelines for the non-surgical management of knee, hip, and polyarticular osteoarthritis.](#)

Raveendhara R. Bannuru, ..., and T. McAlindon. Osteoarthritis and cartilage, 2019. 2568 citations.

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No summary or abstract available

[157] [Effect of Intra-articular Triamcinolone vs Saline on Knee Cartilage Volume and Pain in Patients With Knee Osteoarthritis: A Randomized Clinical Trial](#)

T. McAlindon, ..., and R. Ward. JAMA, 2017. 694 citations.

Not measured Topic Match

No summary or abstract available

[158] [The effectiveness of leucocyte-poor platelet-rich plasma injections on symptomatic early osteoarthritis of the knee: the PEAK randomized controlled trial.](#)

E. Lewis, ..., and K. Ogden. The bone & joint journal, 2022. 46 citations.

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[159] [Platelet-Rich Plasma for Knee Osteoarthritis: What Does the Evidence Say?](#)

Mario Simental-Mendía, ..., and C. Acosta-Olivo. Drugs & Aging, 2023. 13 citations.

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No summary or abstract available

[160] [Intra-Articular Hyaluronic Acid for Knee Osteoarthritis: A Systematic Umbrella Review](#)

W. Glinkowski and WiesBaw Tomaszewski. Journal of Clinical Medicine, 2025. 15 citations.

Not measured Topic Match

Abstract: Objective: to evaluate the efficacy, safety, and cost-effectiveness of intra-articular hyaluronic acid (IAHA) in treating osteoarthritis (OA), considering innovations in formulations, comparative outcomes, and variability in guidelines. This review aims to synthesize evidence supporting the role of IAHA in multimodal treatment strategies. Materials and Methods: A general, narrative, umbrella review of systematic reviews and meta-analyses was conducted. Clinical practice recommendations and guidelines for IAHA use were also reviewed and evaluated. A comprehensive search was conducted across the main medical data sources. Inclusion criteria focused on studies evaluating the efficacy, safety, and impact of IAHA. Key outcomes included pain reduction (e.g.,...

[161] [Les infiltrations : un traitement modificateur de l'arthrose ou simplement un soulagement momentané ?](#)

Martin Lamontagne, ..., and Naomie Maltais. Journal de Traumatologie du Sport, 2025. 0 citations.

Not measured Topic Match

No summary or abstract available

[162] [Comparison of the Efficacy of Platelet-Rich Plasma and Hyaluronic Acid in the Treatment of Degenerative Knee Diseases Over 12 Months of Therapy According to the Results of the Visual Analogue Pain Scale](#)

A. Shtanova, ..., and E. A. Volokitina. Ural Medical Journal, 2025. 0 citations.

Not measured Topic Match

Abstract: Introduction: The primary local treatments for knee osteoarthritis (OAKS) include hyaluronic acid (HA) and platelet-rich plasma (PRP) injections. The visual analogue pain scale (VAS) is often used to assess their effectiveness. Ongoing debate persists regarding which method provides the most sustained efficacy in reducing pain and improving joint function, complicating therapeutic decisions. Aim — to evaluate the efficacy of OACS treatment, as measured by VAS, 12 months after the initiation of intra-articular PRP injection compared to HA injection. Materials and methods: We included only English-language articles with full text available that presented treatment outcomes as VAS in patients treated for OACS with...

[163] [Placebo response to intra-articular injections in knee osteoarthritis: magnitude, evolution over time, and influencing factors. A systematic review and meta-analysis with meta-regression](#)

Davide Previtali, ..., and G. Filardo. EFORT Open Reviews, 2025. 1 citations.

Not measured Topic Match

Abstract: Purpose To quantify the response to intra-articular saline administration in terms of pain, function, and quality of life, with a focus on the evolution of placebo response over time and the identification of influencing factors on the placebo response to knee osteoarthritis injections. Methods After registration on PROSPERO, a systematic review was conducted following PRISMA guidelines to identify double-blind, placebo-controlled randomised clinical trials on intra-articular knee injections for knee osteoarthritis. The placebo response was evaluated through meta-analyses of VAS pain, WOMAC, KOOS, and responder rates at 1-, 3-, 6-, and 12-months on placebo arms of included trials. The evolution of...

[164] [Mechanisms and applications of the regenerative capacity of platelets-based therapy in knee osteoarthritis.](#)

Jiang-Yin Zhang, ..., and Hong-Chen He. Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie, 2024. 12 citations.

Not measured Topic Match

No summary or abstract available

[165] [Post-Injection Protocols For Knee Osteoarthritis: A Systematic Review Of Randomized Controlled Trials](#)

Anna L. Park, ..., and Anthony Luke. Journal of Cartilage & Joint Preservation, 2024. 1 citations.

Not measured Topic Match

No summary or abstract available

[166] [Spin and reporting bias in the use of platelet-rich plasma for the treatment of knee osteoarthritis](#)

Mary K. Richardson, ..., and N. Heckmann. European Journal of Orthopaedic Surgery & Traumatology, 2025. 1 citations.

Not measured Topic Match

Abstract: Systematic reviews and meta-analyses evaluating platelet-rich plasma (PRP) injections are vulnerable to spin (i.e., misrepresentation of study findings). We sought to describe the incidence of spin in the abstracts of systematic reviews and meta-analyses reporting on PRP for knee osteoarthritis. A Preferred Reporting Items for Systematic Reviews and Meta-Analyses search was conducted in Embase, PubMed, and Cochrane databases to identify systematic reviews and meta-analyses on PRP injections for knee osteoarthritis. Data collected from abstracts included 21 types of spin as originally reported by Yavchitz et al., year and journal of publication, level of evidence, and Scopus CiteScore™. Associations between the...

[167] [Molecular Mechanisms and Therapeutic Role of Intra-Articular Hyaluronic Acid in Osteoarthritis: A Precision Medicine Perspective](#)

W. Glinkowski, ..., and Pol-Iaha Study Group. Journal of Clinical Medicine, 2025. 8 citations.

Not measured Topic Match

Abstract: Background: Osteoarthritis (OA) is a degenerative joint disease characterized by progressive cartilage breakdown, synovial inflammation, and pain, which leads to significant disability. IAHA is widely used because of its viscoelastic properties, which restore synovial fluid homeostasis and reduce symptoms. However, emerging evidence suggests that IAHA exerts additional biological effects including chondroprotection, inflammatory modulation, oxidative stress reduction, and pain modulation, which may influence disease progression. Objective: This narrative review examines the biological mechanisms underlying IAHA's role in OA management. The review explored IAHA's effects on synovial fluid viscoelasticity, inflammatory cytokine modulation, cartilage preservation, oxidative stress regulation, and pain pathways, emphasizing the...

[168] [Efficacy and safety of platelet-rich plasma injections for the treatment of knee osteoarthritis: a systematic review and meta-analysis of randomized controlled trials](#)

Chengjing Wang and Bowen Yao. European Journal of Medical Research, 2025. 2 citations.

Not measured Topic Match

Abstract: Knee osteoarthritis (KOA) is a prevalent degenerative joint disorder affecting a significant portion of the elderly population. Despite the availability of various non-surgical and pharmacological treatments, their effectiveness is often limited by temporary symptom relief and lack of disease-modifying properties. Platelet-rich plasma (PRP) has emerged as a promising biological therapy for KOA, with preclinical evidence suggesting its potential to promote cartilage repair and modulate inflammation. This systematic review and meta-analysis aims to comprehensively evaluate the efficacy and safety of PRP injections in the treatment of KOA. A systematic literature search was conducted from January 1, 2021, to December 31, 2024,...

[169] [Utilisation de produits orthobiologiques injectables pour l'arthrose du genou : un consensus européen ESSKA-ORBIT. Partie 1 – produits dérivés du sang \(plasma riche en plaquettes\)](#)

Lior Laver, ..., and Laura de Girolamo. Journal de Traumatologie du Sport, 2025. 1 citations.

Not measured Topic Match

No summary or abstract available

[170] [Platelet-Rich Plasma in the Treatment of Musculoskeletal Disease in 2025 and Beyond.](#)

Benjamin B Rothrauff, ..., and Johnny Huard. The American journal of sports medicine, 2026. 0 citations.

Not measured Topic Match

Abstract: Platelet-rich plasma (PRP) is a blood-based orthobiologic used to treat a myriad of musculoskeletal conditions. While in vitro and preclinical studies on PRP have been promising, clinical results have been mixed. The heterogeneity in clinical benefits is attributable to both the complexity and variability of PRP as a biologic as well as the diversity of targeted tissues and ailments. Many variables have been proposed to affect PRP's bioactivity and clinical effects, with differing levels of evidence demonstrated for each variable. These variables can be broadly categorized as biological, technical, and abnormality-specific factors. Additionally, insufficient characterization of PRP in clinical studies...

[171] [Corticosteroids versus platelet-rich plasma injections for knee osteoarthritis: Where is there more evidence? A systematic review of 60 years of literature.](#)

Angelo Boffa, ..., and Giuseppe Filardo. The Knee, 2025. 1 citations.

Not measured Topic Match

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[172] [Effectiveness of Stromal Vascular Fraction \(SVF\) and Platelet-Rich Plasma \(PRP\) in Patients With Knee Osteoarthritis: Protocol for a Phase 3, Prospective, Randomized, Controlled, Multicenter Study \(SPOST Study\)](#)

A. Schwitzguebel, ..., and Charles Benaim. JMIR Research Protocols, 2024. 0 citations.

Not measured Topic Match

Abstract: Background Available evidence on the conservative treatment of knee osteoarthritis still leaves questions about the efficacy of platelet-rich plasma (PRP) and whether stromal vascular fraction (SVF) offers a superior therapeutic tool. Objective This study aims to assess the clinical efficacy of SVF as adjuvant therapy to PRP on functionality and tissue regeneration for knee osteoarthritis. Methods In a multicenter, randomized, triple-blind, controlled trial, 108 individuals with knee osteoarthritis will be block-randomized in a 1:1 ratio. Patients will receive an initial single PRP or PRP + SVF injection followed by PRP doses at 1 month and 2 months. The primary endpoint...

[173] [3D-MRI analysis of cartilage thickness changes after PRP injection in medial knee osteoarthritis: A preliminary report](#)

I. Sekiya, ..., and N. Ozeki. PLOS One, 2025. 1 citations.

Not measured Topic Match

Abstract: The regenerative effect of platelet-rich plasma injection on cartilage in knee osteoarthritis remains controversial. The purpose of this study was to use our recently developed 3D-MRI evaluation system to examine in detail the changes in cartilage thickness occurring six months after platelet-rich plasma injection. This study included 21 knees from 16 patients with medial knee osteoarthritis. An autologous protein solution (APS) was injected as platelet-rich plasma, and magnetic resonance imaging scans were taken before and six months after the injection. Cartilage thickness was quantified in seven regions using SYNAPSE 3D. Based on previous studies, the measurement error was set at...

[174] [Platelet-Based Injections for Knee Osteoarthritis: Do They Work, Are They Safe?](#)

Giulia Marcella Maryse Chiari Gaggia, ..., and Elizaveta Kon. Clinics in sports medicine, 2025. 0 citations.

Not measured Topic Match

No summary or abstract available

[175] [Patients With Knee Osteoarthritis Who Receive Platelet-Rich Plasma or Bone-Marrow Aspirate Concentrate Injections Have Better Outcomes Than Patients Who Receive Hyaluronic Acid: Systematic Review and Meta-analysis.](#)

J. W. Belk, ..., and Matthew J. Kraeutler. Arthroscopy : the journal of arthroscopic & related surgery : official publication of the Arthroscopy Association of North America and the International Arthroscopy Association, 2023. 69 citations.

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[176] [Orthobiologics: Injectable Treatments for Knee Osteoarthritis.](#)

Angelo Boffa and Giuseppe Filardo. Clinics in sports medicine, 2025. 0 citations.

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No summary or abstract available

[177] [Randomized Controlled Trials for Platelet-Rich Plasma Use in Knee Osteoarthritis Rarely Report Key Sociodemographic Patient Variables: A Scoping Review](#)

Jacob L. Kotlier, ..., and F. Petriglione. Arthroscopy, Sports Medicine, and Rehabilitation, 2024. 0 citations.

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No summary or abstract available

[178] [Efficacy of Intra-Articular Platelet-Rich Plasma in Knee Osteoarthritis: a Systematic Review and Meta-Analysis](#)

Matúš Sloviak, ..., and J. Gallo. Acta chirurgiae orthopaedicae et traumatologiae Cechoslovaca, 2025. 0 citations.

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