

Blue Cross Blue Shield of Massachusetts is an Independent Licenses of the Blue Cross and Blue Shield Association

Medical Policy Prolotherapy

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Policy Number: 183

BCBSA Reference Number: 2.01.26 (For Plans internal use only)

Related Policies

Diagnosis and Treatment of Sacroiliac Joint Pain, #320

Policy

Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity

Prolotherapy is considered INVESTIGATIONAL as a treatment of musculoskeletal pain.

Prior Authorization Information

Inpatient

 For services described in this policy, precertification/preauthorization <u>IS REQUIRED</u> for all products if the procedure is performed <u>inpatient</u>.

Outpatient

• For services described in this policy, see below for products where prior authorization <u>might be</u> <u>required</u> if the procedure is performed <u>outpatient</u>.

	Outpatient
Commercial Managed Care (HMO and POS)	This is not a covered service.
Commercial PPO and Indemnity	This is not a covered service.

CPT Codes / HCPCS Codes / ICD Codes

Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

The following codes are included below for informational purposes only; this is not an all-inclusive list.

The following CPT code is considered investigational for <u>Commercial Members: Managed Care</u> (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:

HCPCS Codes

HCPCS codes:	Code Description
M0076	Prolotherapy

Description

The goal of prolotherapy is to promote tissue repair or growth by prompting the release of growth factors, such as cytokines, or by increasing the effectiveness of existing circulating growth factors. The mechanism of action is not well understood but may involve local irritation and/or cell lysis. Agents used with prolotherapy have included zinc sulfate, psyllium seed oil, combinations of dextrose, glycerin, and phenol, or dextrose alone, often combined with a local anesthetic. Polidocanol, sodium morrhuate, and vascular sclerosants have also been used to sclerose areas of high intratendinous blood flow associated with tendinopathies. Prolotherapy typically involves multiple injections per session conducted over a series of treatment sessions.

A similar approach involves the injection of autologous platelet-rich plasma, which contains a high concentration of platelet-derived growth factors.

Summary

Prolotherapy describes a procedure intended for healing and strengthening ligaments and tendons by injecting an agent that induces inflammation and stimulates endogenous repair mechanisms. Prolotherapy may also be referred to as proliferant injection, prolo, joint sclerotherapy, regenerative injection therapy, growth factor stimulation injection, or nonsurgical tendon, ligament, and joint reconstruction.

For individuals who have musculoskeletal pain (eg, chronic neck, back pain), osteoarthritic pain, or tendinopathies of the upper or lower limbs who receive prolotherapy, the evidence includes small, randomized trials with inconsistent results. Relevant outcomes are symptoms, functional outcomes, and quality of life. The strongest evidence evaluates the use of prolotherapy for the treatment of osteoarthritis, but the clinical significance of the therapeutic results is uncertain. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Policy History

Date	Action
1/2024	Annual policy review. References updated. Policy statements unchanged.
1/2023	Annual policy review. Description, summary, and references updated. Policy
	statements unchanged.
1/2022	Annual policy review. Description, summary, and references updated. Policy
	statements unchanged.
1/2021	Annual policy review. Description, summary, and references updated. Policy
	statements unchanged.
1/2021	Medicare information removed. See MP #132 Medicare Advantage Management for
	local coverage determination and national coverage determination reference.
12/2019	Annual policy review. Description, summary, and references updated. Policy
	statements unchanged.
1/2018	New references added from Annual policy review.
11/2015	New references added from Annual policy review. Added coding language.
12/2013	New references from Annual policy review.
11/2011-4/2012	Medical policy ICD 10 remediation: Formatting, editing and coding updates.
	No changes to policy statements.
6/2011	Reviewed - Medical Policy Group - Orthopedics, Rehabilitation and Rheumatology.

	No changes to policy statements.
7/2010	Reviewed - Medical Policy Group - Orthopedics, Rehabilitation Medicine and
	Rheumatology. No changes to policy statements.
5/1/2010	Medical Policy 183 effective 5/1/2010 describing ongoing non-coverage
4/2010	Annual policy review. No changes to policy statements.
9/2008	Annual policy review. No changes to policy statements.
8/2007	Annual policy review. No changes to policy statements.

Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:

Medical Policy Terms of Use

Managed Care Guidelines

Indemnity/PPO Guidelines

Clinical Exception Process

Medical Technology Assessment Guidelines

References

- 1. Dagenais S, Yelland MJ, Del Mar C, et al. Prolotherapy injections for chronic low-back pain. Cochrane Database Syst Rev. Apr 18 2007; 2007(2): CD004059. PMID 17443537
- 2. Dagenais S, Mayer J, Haldeman S, et al. Evidence-informed management of chronic low back pain with prolotherapy. Spine J. 2008; 8(1): 203-12. PMID 18164468
- 3. Chou R, Atlas SJ, Stanos SP, et al. Nonsurgical interventional therapies for low back pain: a review of the evidence for an American Pain Society clinical practice guideline. Spine (Phila Pa 1976). May 01 2009; 34(10): 1078-93. PMID 19363456
- 4. Yelland MJ, Glasziou PP, Bogduk N, et al. Prolotherapy injections, saline injections, and exercises for chronic low-back pain: a randomized trial. Spine (Phila Pa 1976). Jan 01 2004; 29(1): 9-16; discussion 16. PMID 14699269
- 5. Klein RG, Eek BC, DeLong WB, et al. A randomized double-blind trial of dextrose-glycerine-phenol injections for chronic, low back pain. J Spinal Disord. Feb 1993; 6(1): 23-33. PMID 8439713
- 6. Ongley MJ, Klein RG, Dorman TA, et al. A new approach to the treatment of chronic low back pain. Lancet. Jul 18 1987; 2(8551): 143-6. PMID 2439856
- 7. Bahgat MM, Abdel-Hamid AM. Is dextrose prolotherapy beneficial in the management of temporomandibular joint internal derangement? A systematic review. Cranio. Apr 25 2023: 1-9. PMID 37097125
- 8. Kim WM, Lee HG, Jeong CW, et al. A randomized controlled trial of intra-articular prolotherapy versus steroid injection for sacroiliac joint pain. J Altern Complement Med. Dec 2010; 16(12): 1285-90. PMID 21138388
- 9. Reeves KD, Hassanein KM. Long-term effects of dextrose prolotherapy for anterior cruciate ligament laxity. Altern Ther Health Med. 2003; 9(3): 58-62. PMID 12776476
- Waluyo Y, Artika SR, Insani Nanda Wahyuni AMAK, et al. Efficacy of Prolotherapy for Osteoarthritis: A Systematic Review. J Rehabil Med. Feb 27 2023; 55: jrm00372. PMID 36847731
- 11. Cortez VS, Moraes WA, Taba JV, et al. Comparing dextrose prolotherapy with other substances in knee osteoarthritis pain relief: A systematic review. Clinics (Sao Paulo). 2022; 77: 100037. PMID 35594623
- 12. Arias-Vázquez PI, Tovilla-Zárate CA, Castillo-Avila RG, et al. Hypertonic Dextrose Prolotherapy, an Alternative to Intra-Articular Injections With Hyaluronic Acid in the Treatment of Knee Osteoarthritis: Systematic Review and Meta-analysis. Am J Phys Med Rehabil. Sep 01 2022; 101(9): 816-825. PMID 34740224
- 13. Wee TC, Neo EJR, Tan YL. Dextrose prolotherapy in knee osteoarthritis: A systematic review and meta-analysis. J Clin Orthop Trauma. Aug 2021; 19: 108-117. PMID 34046305
- 14. Sert AT, Sen EI, Esmaeilzadeh S, et al. The Effects of Dextrose Prolotherapy in Symptomatic Knee Osteoarthritis: A Randomized Controlled Study. J Altern Complement Med. May 2020; 26(5): 409-417. PMID 32223554
- 15. Rabago D, Patterson JJ, Mundt M, et al. Dextrose prolotherapy for knee osteoarthritis: a randomized controlled trial. Ann Fam Med. 2013; 11(3): 229-37. PMID 23690322

- Reeves KD, Hassanein K. Randomized prospective double-blind placebo-controlled study of dextrose prolotherapy for knee osteoarthritis with or without ACL laxity. Altern Ther Health Med. Mar 2000; 6(2): 68-74, 77-80, PMID 10710805
- 17. Bayat M, Hojjati F, Boland Nazar NS, et al. Comparison of Dextrose Prolotherapy and Triamcinolone Intraarticular Injection on Pain and Function in Patients with Knee Osteoarthritis A Randomized Clinical Trial. Anesth Pain Med. Apr 2023; 13(2): e134415. PMID 37601963
- 18. Jahangiri A, Moghaddam FR, Najafi S. Hypertonic dextrose versus corticosteroid local injection for the treatment of osteoarthritis in the first carpometacarpal joint: a double-blind randomized clinical trial. J Orthop Sci. Sep 2014; 19(5): 737-43. PMID 25158896
- 19. Rabago D, Mundt M, Zgierska A, et al. Hypertonic dextrose injection (prolotherapy) for knee osteoarthritis: Long term outcomes. Complement Ther Med. Jun 2015; 23(3): 388-95. PMID 26051574
- 20. Reeves KD, Hassanein K. Randomized, prospective, placebo-controlled double-blind study of dextrose prolotherapy for osteoarthritic thumb and finger (DIP, PIP, and trapeziometacarpal) joints: evidence of clinical efficacy. J Altern Complement Med. Aug 2000; 6(4): 311-20. PMID 10976977
- 21. Fong HPY, Zhu MT, Rabago DP, et al. Effectiveness of Hypertonic Dextrose Injection (Prolotherapy) in Plantar Fasciopathy: A Systematic Review and Meta-analysis of Randomized Controlled Trials. Arch Phys Med Rehabil. Apr 23 2023. PMID 37098357
- 22. Ahadi T, Cham MB, Mirmoghtadaei M, et al. The effect of dextrose prolotherapy versus placebo/other non-surgical treatments on pain in chronic plantar fasciitis: a systematic review and meta-analysis of clinical trials. J Foot Ankle Res. Feb 10 2023; 16(1): 5. PMID 36759882
- 23. Goh SL, Jaafar Z, Gan YN, et al. Efficacy of prolotherapy in comparison to other therapies for chronic soft tissue injuries: A systematic review and network meta-analysis. PLoS One. 2021; 16(5): e0252204. PMID 34038486
- 24. Chung MW, Hsu CY, Chung WK, et al. Effects of dextrose prolotherapy on tendinopathy, fasciopathy, and ligament injuries, fact or myth?: A systematic review and meta-analysis. Medicine (Baltimore). Nov 13 2020; 99(46): e23201. PMID 33181700
- 25. Zhu M, Rabago D, Chung VC, et al. Effects of Hypertonic Dextrose Injection (Prolotherapy) in Lateral Elbow Tendinosis: A Systematic Review and Meta-analysis. Arch Phys Med Rehabil. Nov 2022; 103(11): 2209-2218. PMID 35240122
- 26. Scarpone M, Rabago DP, Zgierska A, et al. The efficacy of prolotherapy for lateral epicondylosis: a pilot study. Clin J Sport Med. May 2008; 18(3): 248-54. PMID 18469566
- 27. Akcay S, Gurel Kandemir N, Kaya T, et al. Dextrose Prolotherapy Versus Normal Saline Injection for the Treatment of Lateral Epicondylopathy: A Randomized Controlled Trial. J Altern Complement Med. Dec 2020; 26(12): 1159-1168. PMID 32990454
- 28. Apaydin H, Bazancir Z, Altay Z. Injection Therapy in Patients with Lateral Epicondylalgia: Hyaluronic Acid or Dextrose Prolotherapy? A Single-Blind, Randomized Clinical Trial. J Altern Complement Med. Dec 2020; 26(12): 1169-1175. PMID 32931308
- 29. Bayat M, Raeissadat SA, Mortazavian Babaki M, et al. Is Dextrose Prolotherapy Superior To Corticosteroid Injection In Patients With Chronic Lateral Epicondylitis?: A Randomized Clinical Trial. Orthop Res Rev. 2019; 11: 167-175. PMID 31819675
- 30. Carayannopoulos A, Borg-Stein J, Sokolof J, et al. Prolotherapy versus corticosteroid injections for the treatment of lateral epicondylosis: a randomized controlled trial. PM R. Aug 2011; 3(8): 706-15. PMID 21871414
- 31. Rabago D, Best TM, Zgierska AE, et al. A systematic review of four injection therapies for lateral epicondylosis: prolotherapy, polidocanol, whole blood and platelet-rich plasma. Br J Sports Med. Jul 2009; 43(7): 471-81. PMID 19028733
- 32. Yelland MJ, Sweeting KR, Lyftogt JA, et al. Prolotherapy injections and eccentric loading exercises for painful Achilles tendinosis: a randomised trial. Br J Sports Med. Apr 2011; 45(5): 421-8. PMID 19549615
- 33. Lin LC, Lee YH, Chen YW, et al. Comparison Clinical Effects of Hypertonic Dextrose and Steroid Injections on Chronic Subacromial Bursitis: A Double-Blind Randomized Controlled Trial. Am J Phys Med Rehabil. Oct 01 2023; 102(10): 867-872. PMID 36897810
- 34. Kazempour Mofrad M, Rezasoltani Z, Dadarkhah A, et al. Periarticular Neurofascial Dextrose Prolotherapy Versus Physiotherapy for the Treatment of Chronic Rotator Cuff Tendinopathy: Randomized Clinical Trial. J Clin Rheumatol. Jun 01 2021; 27(4): 136-142. PMID 32975923

- 35. Bertrand H, Reeves KD, Bennett CJ, et al. Dextrose Prolotherapy Versus Control Injections in Painful Rotator Cuff Tendinopathy. Arch Phys Med Rehabil. Jan 2016; 97(1): 17-25. PMID 26301385
- 36. Schneider HP, Baca JM, Carpenter BB, et al. American College of Foot and Ankle Surgeons Clinical Consensus Statement: Diagnosis and Treatment of Adult Acquired Infracalcaneal Heel Pain. J Foot Ankle Surg. 2018; 57(2): 370-381. PMID 29284574
- 37. Kolasinski SL, Neogi T, Hochberg MC, et al. 2019 American College of Rheumatology/Arthritis Foundation Guideline for the Management of Osteoarthritis of the Hand, Hip, and Knee. Arthritis Rheumatol. Feb 2020; 72(2): 220-233. PMID 31908163
- 38. North American Spine Society. Diagnosis and Treatment of Low Back Pain. 2020. https://www.spine.org/Portals/0/assets/downloads/ResearchClinicalCare/Guidelines/LowBackPain.pdf . Accessed September 22, 2023.
- 39. Centers for Medicare and Medicaid Services. National Coverage Determination (NCD) for PROLOTHERAPY, Joint Sclerotherapy, and Ligamentous Injections with Sclerosing Agents (150.7). 1999;https://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=15&ncdver=1&bc=AAAAQAAAAAAA&. Accessed September 22, 2023.